



# MMWR<sup>TM</sup>

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### Domestic Violence Awareness Month — October 2005

October is Domestic Violence Awareness Month (DVAM). During this month, CDC is encouraging men and women to help prevent intimate partner violence (IPV) by taking an active role in promoting healthy relationships. IPV is defined as physical, sexual, or psychological harm to a person by a current or former partner or spouse. This type of violence can occur among heterosexual or same-sex couples and does not require sexual intimacy.

IPV affects persons at all stages of life. Children who witness IPV are at greater risk for failure in school and developmental problems (1). Adolescents involved with an abusive partner report increased levels of substance use and antisocial behavior (2). IPV in adults can result in depression, broken bones, and heart or circulatory conditions (3).

In recognition of DVAM, CDC is launching a website about the Domestic Violence Prevention Enhancement and Leadership Through Alliances program and co-hosting an Internet seminar on working with men to prevent IPV. Additional information about IPV is available at <http://www.cdc.gov/ncipc/factsheets/ipvfacts.htm>.

#### References

1. Nelson HD, Nygren P, McInerney Y, Klein J, US Preventive Services Task Force. Screening women and elderly adults for family and intimate partner violence: a review of the evidence for the U.S. Preventive Services Task Force. *Ann Intern Med* 2004;140:387–96.
2. Roberts TA, Klein JD, Fisher S. Longitudinal effect of intimate partner abuse on high-risk behavior among adolescents. *Arch Pediatr Adolesc Med* 2003;157:875–81.
3. Tjaden P, Thoennes N. Extent, nature, and consequences of intimate partner violence: findings from the National Violence Against Women Survey. Washington, DC: US Department of Justice; 2000. Publication no. NCJ-181867. Available at <http://www.ojp.usdoj.gov/nij/pubs-sum/181867.htm>.

### Intimate Partner Violence Injuries — Oklahoma, 2002

Intimate partner violence (IPV) is a serious public health problem in the United States and a common cause of injury. Prevalence rates of IPV vary by the surveillance methods and definitions used (1). National data from the 1995 National Violence Against Women Survey indicate that 22.1% of women and 7.4% of men experience IPV during their lifetimes and that 1.3% of women and 0.9% of men experience IPV annually (2). IPV results in an estimated \$4.1 billion each year in direct medical and mental health-care costs, including \$159 million in emergency department (ED) treatments for IPV physical assaults (3). IPV might constitute as much as 17% of all violence-related injuries treated in EDs (4). To determine the magnitude of the IPV problem in Oklahoma, including IPV-related injuries and medical service utilization, researchers analyzed injury surveillance data from ED medical records and data from the Oklahoma Women's Health Survey (OWHS). This report summarizes the findings, which indicated that, during 2002 in Oklahoma, approximately 16%

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**Notifiable Disease Morbidity and 122 Cities Mortality Data**

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of all ED visits for assaults were for IPV injuries, including 35% of assault visits among females and 3% of assault visits among males. In addition, results of the OWHS for 2001–2003 indicated that 5.9% of surveyed Oklahoma women aged 18–44 years sustained an IPV injury during the preceding year. Overall, IPV resulted in a substantial number of injuries, particularly to women, many of whom required treatment in EDs. Medical recognition and documentation of IPV are important for identification of persons in need of services.

**IPV Injury Surveillance in EDs, 2002**

IPV injuries\* became a reportable condition to the Oklahoma State Department of Health (OSDH) in January 2000 for the purposes of a 5-year study. After a pilot project in the Oklahoma City metropolitan statistical area (MSA) during July 1, 2000–December 31, 2001, IPV injury surveillance was conducted statewide during 2002. Data were collected via a random sample of 118 hospital EDs (N = 20), stratified by hospital size (large: ≥100 beds; small: ≤99 beds) to ensure a representative sample of Oklahoma hospitals. All ED medical records for assaults (external cause of injury codes,† E960–E968.9) and adult abuse/maltreatment (ICD-9-CM‡ codes 995.81–995.85) were reviewed to identify IPV injuries; an assault was determined to be IPV if the medical record indicated that the perpetrator of the injuries was an intimate partner. Intimate partners included current and former marital and nonmarital partners, dating partners, and same-sex partners. Males and females aged ≥15 years were included. Multiple ED visits for IPV injuries sustained during the same assault incident were counted once. Weighted population estimates and 95% confidence intervals (CIs) were derived from the sample data using hospital size and total number of annual ED admissions reported by hospitals in the state's annual health-care utilization survey. Rates were calculated using U.S. Census bridged-race population estimates for 2002 for persons aged ≥15 years.

A total of 3,988 ED medical records for assaults from the sampled hospitals were reviewed. Of these, 648 (16%) were documented as IPV assaults. Among females, 575 (35%) of all ED assault records reviewed were IPV-related, whereas 73 (3%) of ED assault records among males were IPV-related. For 1,939 (49%) of the assaults (31% of assaults on females and 61% of assaults on males), the perpetrator was not speci-

\* For injury surveillance purposes, IPV injuries were defined as intentional injuries inflicted by an intimate partner. Cases included only Oklahoma residents.

† Available at <http://www.cdc.gov/nchs/about/otheract/icf/matrix10.htm>.

‡ International Classification of Diseases, Ninth Revision, Clinical Modification.

fied. After exclusions were applied (persons who died or were hospitalized, out-of-state residents, and multiple treatments for the same assault), 594 (15%) IPV injury cases were identified. The sample data were weighted, yielding an estimated 2,457 (CI = 2,188–2,726) IPV cases treated in EDs statewide (rate: 88.6 per 100,000 population aged ≥15 years). Ninety-one percent of cases were among females (mean age: 32 years, range: 16–66 years), and 9% were among males (mean age: 36 years, range: 18–68 years). Ninety percent of females treated for IPV injuries in EDs were aged 18–44 years.

IPV injury rates varied by race. The rate of IPV injuries per 100,000 population aged ≥15 years among black females (546.2) was 2.8 times higher than the rate for American Indian/Alaska Native females (192.3) and 4.7 times higher than the rate for white females (116.1). Black females had the highest rate of IPV injury across all age groups (Table 1). Among males, the rate per 100,000 population aged ≥15 years for blacks (94.8) was more than five times higher than that for American Indians/Alaska Natives (18.2) and nearly 12 times higher than that for whites (8.5).

A total of 1,351 injuries for 576 IPV injury cases were documented and classified by injury type and anatomic site of injury. The majority (83%) of persons with IPV injuries had soft-tissue injuries; 16% had strains/sprains, 10% had fractures/dislocations, 7% had brain injuries, 1% had eye injuries, 1% had stab wounds, and 2% had other injuries. The most frequently injured body regions were the head, neck, and face (48% of injuries), followed by the upper extremities (25%), chest and back (12%), lower extremities (10%), and abdomen/pelvic region (3%) (Table 2).

## IPV Data from OWHS, 2001–2003

OWHS data were collected during 2001–2003 in a random-digit-dialed telephone survey of 6,163 Oklahoma women aged 18–44 years who were married or had a romantic relationship or date during the preceding year. The sampling scheme and survey administration followed Behavioral Risk Factor Surveillance System (BRFSS) methodology (5), with changes made to account for survey differences in study inclusion criteria. All analyses were weighted for the sampling design. Definitions of IPV used in the survey were derived from CDC-recommended definitions (1). Survey respondents who reported at least one occurrence of physical IPV or forced sexual IPV by any current or former partner during the pre-

**TABLE 1. Estimated rates\* of intimate partner violence (IPV) injuries among persons treated and released from hospital emergency departments, by sex, age group, and race — Oklahoma, 2002**

Sex/Age group (yrs)	Race			
	All races	Black	American Indian/Alaska Native	White
<b>Females</b>				
15–24	268.1	906.7	215.7	188.2
25–34	309.9	669.8	419.7	256.7
35–44	263.9	741.1	257.6	207.1
45–54	67.9	246.9	83.7	48.8
55–64	14.1	81.6	0	11.1
≥65	3.0	31.8	0	1.7
<b>Total</b>	<b>157.8</b>	<b>546.2</b>	<b>192.3</b>	<b>116.1</b>
<b>Males</b>				
15–24	16.8	—†	—	—
25–34	20.9	—	—	—
35–44	29.9	—	—	—
45–54	14.0	—	—	—
55–64	2.4	—	—	—
≥65	2.1	—	—	—
<b>Total</b>	<b>15.6</b>	<b>94.8</b>	<b>18.2</b>	<b>8.5</b>

\* Per 100,000 population aged ≥15 years.

† Rate note estimated by race.

**TABLE 2. Type of intimate partner violence (IPV) injuries\* among persons treated and released from hospital emergency departments, by injury type and anatomic site — Oklahoma, 2002**

Injury	Anatomic site of injury					
	Head, neck, and face No. (%)	Chest and back No. (%)	Upper extremities No. (%)	Lower extremities No. (%)	Abdomen/Pelvic region No. (%)	Total
Soft tissue†	521 (47)	141 (13)	279 (25)	117 (11)	36 (3)	1,094
Sprain/Strain	42 (38)	14 (13)	41 (37)	14 (13)	—	111
Fracture/Dislocation	28 (47)	2 (3)	25 (42)	5 (8)	—	60
Brain	44 (100)	—	—	—	—	44
Eye	9 (100)	—	—	—	—	9
Stab wound	4 (18)	2 (9)	11 (50)	4 (18)	1 (5)	22
Other§	6 (55)	1 (9)	—	—	4 (36)	11
<b>Total</b>	<b>654 (48)</b>	<b>160 (12)</b>	<b>356 (25)</b>	<b>140 (10)</b>	<b>41 (3)</b>	<b>1,351</b>

\* Includes documented injuries in 576 IPV injury cases.

† Soft-tissue injuries include contusions, abrasions, lacerations, and punctures.

§ Other injuries included sexual assaults (four), dental injuries (three), hearing injuries (two), burns (one), and spinal cord injury (one).

ceding year were asked about resulting injuries. Women who reported any preceding-year IPV injury were asked about their need for and use of medical services. The CASRO response rate was 65.5%.

Among 6,163 respondents to the OWHS, 330 (weighted percentage: 5.9%; CI = 5.0%–6.8%) women reported IPV injuries during the preceding year. Nearly one third (31.6%)

of injured women reported that they needed medical attention for their injuries; 13.2% reported never receiving medical attention when needed, 12.2% sometimes received medical attention when needed, and 6.3% reported always receiving medical services when needed (Table 3). A total of 18.4% (CI = 13.6%–24.5%) of women with IPV injuries received at least one type of medical treatment during the preceding year. Treatment for IPV injuries was received in hospital EDs by 9.8% of injured women; 2.1% were hospitalized overnight, and 3.3% received emergency medical services, including ambulance or paramedic services. Eleven percent of injured women received treatment at a private doctor or dental office, and 5.7% received treatment in an urgent care or other health clinic.

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**Editorial Note:** In 1992, the American Medical Association issued diagnostic and treatment guidelines for IPV and a call for routine screening (6). Since that time, the practice of screening women for abuse has come under question (7). Screening has been effective for identifying abuse but has not been demonstrated to reduce violence (8). Evidence that screening is beneficial or, at least, not harmful, is lacking (9). However, the health and mental health consequences of IPV are well documented and sufficient to warrant identification, treatment, and service referral for IPV in the medical setting (10).

Data in this report demonstrate that IPV has a substantial impact on health-care systems in Oklahoma, with implications for provision of medical, social, and judicial services, particularly for minority women. The prevalence of IPV in-

jury among black women treated in EDs was substantially higher than the prevalence among American Indian/Alaska Native or white women, some of which might be accounted for by racial differences in ED utilization patterns, patient disclosure of IPV, or provider query about IPV. The OWHS data further suggest that ED treatment for IPV injuries represents only about 10% of women injured by a partner each year.

The findings of this report are subject to at least five limitations. First, inclusion of IPV injury cases depended on documentation in ED medical records, which were often incomplete. The perpetrator was not specified and IPV status could not be determined for nearly half of the assaults noted in ED records. Thus, the reported rates of ED treatment for IPV injuries are likely underestimates. Second, the sampled hospitals might not have used standard practices for identifying IPV, which would also affect rate estimation. Third, the total number of IPV assaults was used to calculate rates per 100,000 population; however, 18 (3%) persons were treated for more than one assault during the study period and were counted more than once, which also affected rate estimation. Fourth, the survey data might also underestimate IPV injury prevalence because women experienced the most severe IPV might not have been able to participate in a telephone survey. Finally, injury rates from the survey data might not be generalizable to the target population because of nonresponse.

Medical tracking systems depend on recognition and documentation. A separate study conducted by OSDH in the Oklahoma City MSA revealed that only 43% of IPV hospitalizations were identified by specific IPV codes: external cause of injury code for partner/spouse perpetration (E967.3) and/or the ICD-9-CM code for adult physical abuse (995.81) (OSDH, unpublished data, 2005). For the ED data presented in this report, case ascertainment was not possible in nearly half of the ED assault records reviewed because the perpetrator of the assault was not specified. Because of the nature and stigma of IPV, a proportion of cases will never be recognized as IPV. However, improving medical recognition and documentation of IPV through continued training and policy is warranted, not only for surveillance purposes but also to identify persons in need of services. OSDH is providing training for hospital personnel and health-care providers on IPV screening, recognition, documentation, and service referral. The findings of this report will also be used in strategic planning to determine priorities for prevention of IPV in Oklahoma.

**TABLE 3. Medical service utilization among women reporting intimate partner violence (IPV) injuries during the preceding year — Oklahoma, 2001–2003\***

Medical service utilization	%†	95% CI‡
Received medical attention when needed		
Never	13.2	9.1–18.8
Sometimes	12.2	8.3–17.4
Always	6.3	3.6–10.5
Type of medical services received§		
Hospital emergency department	9.8	6.4–14.9
Overnight hospital admission	2.1	1.0–4.2
Private doctor or dentist office	11.0	7.4–16.2
Urgent care clinic or other health clinic	5.7	3.1–10.3
Emergency medical services	3.3	1.4–7.5

\* Includes 330 women reporting IPV injuries in the Oklahoma Women's Health Survey.

† Percentages and confidence intervals (CIs) were weighted for sampling design.

§ Categories under type of medical services received are not mutually exclusive.

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### References

1. Saltzman LE, Fanslow JL, McMahon PM, Shelley GA. Intimate partner violence surveillance: uniform definitions and recommended data elements, version 1.0. Atlanta, GA: CDC, National Center for Injury Prevention and Control; 1999. Available at [http://www.cdc.gov/ncipc/pub-res/ipv\\_surveillance/intimate.htm](http://www.cdc.gov/ncipc/pub-res/ipv_surveillance/intimate.htm).
2. Tjaden P, Thoennes N. Full report on the prevalence, incidence, and consequences of violence against women. Washington, DC: US Department of Justice; 2000. Publication no. NCJ-183781. Available at <http://www.ojp.usdoj.gov/nij/pubs-sum/183781.htm>.
3. CDC. Costs of intimate partner violence against women in the United States. Atlanta, GA: US Department of Health and Human Services, CDC; 2003. Available at [http://www.cdc.gov/ncipc/pub-res/ipv\\_cost/00\\_preface.htm](http://www.cdc.gov/ncipc/pub-res/ipv_cost/00_preface.htm).
4. Bureau of Justice Statistics. Violence-related injuries treated in hospital emergency departments. Washington, DC: US Department of Justice; 1997. Publication no NCJ-156921. Available at <http://www.ojp.usdoj.gov/bjs/abstract/vrithed.htm>.
5. CDC. Behavioral Risk Factor Surveillance System: survey data and technical information. Atlanta, GA: US Department of Health and Human Services, CDC. Available at [http://www.cdc.gov/brfss/technical\\_infodata](http://www.cdc.gov/brfss/technical_infodata).
6. Flitcraft A, Hadley S, Hendricks-Matthews M, McLeer S, Warshaw C. Diagnostic and treatment guidelines on domestic violence. Chicago, IL: American Medical Association; 1992. Available at <http://www.ama-assn.org/ama/pub/category/3548.html>.
7. US Preventive Services Task Force. Screening for family and intimate partner violence: recommendation statement. Ann Intern Med 2004; 140:382–6.
8. Wathen C, MacMillan H. Interventions for violence against women: scientific review. JAMA 2005;289:589–600.
9. Ramsay J, Richardson J, Carter Y, et al. Should health care professionals screen women for domestic violence? Systematic review. BMJ 2002;325:314.
10. Campbell JC. Health consequences of intimate partner violence. Lancet 2002;359:1331–6.

## Influenza Vaccination Levels Among Persons Aged $\geq 65$ Years and Among Persons Aged 18–64 Years with High-Risk Conditions — United States, 2003

Influenza vaccination is an effective tool for preventing hospitalization and death among persons aged  $\geq 65$  years and among persons aged 18–64 years with medical conditions that increase the risk for influenza-related complications (1). Two

national health objectives for 2010 are to increase influenza vaccination coverage to 90% among persons aged  $\geq 65$  years and to 60% among persons aged 18–64 years who have one or more high-risk conditions (objectives 14-29a and 14-29c, respectively) (2). To determine influenza vaccination coverage among persons in both targeted groups, CDC analyzed data from the 2003 National Health Interview Survey (NHIS). This report summarizes the results of that analysis, which determined that influenza vaccination coverage among persons aged  $\geq 65$  years and persons aged 18–64 years with high-risk conditions remains substantially below 2010 target levels. In addition, racial/ethnic disparities in coverage levels persist in both targeted populations. To improve overall influenza vaccination coverage and reduce racial/ethnic disparities, combinations of evidence-based effective interventions should be implemented (3), and the influenza vaccine supply should be stabilized (4).

NHIS is conducted using face-to-face interviews among the civilian, noninstitutionalized U.S. population. Questions regarding influenza vaccination are part of the sample adult core questionnaire, which collects information regarding the health of one randomly selected adult in each family. All respondents were asked, "During the past 12 months, have you had a flu shot?" In 1994, only half-year data were available. In 1990, 1992, and 1996, influenza vaccination questions were not included in the questionnaire. Therefore, midpoint values between the preceding and following years were used to estimate coverage in those years. Before 1997, vaccination coverage among persons by high-risk group could not be assessed for purpose of comparison because the questionnaire was redesigned in 1997 and information on health conditions was not collected in the same manner.

NHIS data for 2003 were analyzed to estimate influenza vaccination coverage in the targeted populations by race/ethnicity and sociodemographic characteristics, including access to health care. Trends in annual estimates during 1989–2003 were evaluated. Final response rates for the adult core sample during 1997–2003 ranged from 69.6% to 80.4%; the response rate in 2003 was 74.2%. Only non-Hispanic whites, non-Hispanic blacks, and Hispanics were included in the analysis for 2003, totaling 5,538 adults aged  $\geq 65$  years and 4,238 adults aged 18–64 years with high-risk conditions. Samples were weighted to produce national estimates. Univariate analysis was conducted using statistical software to account for the complex survey design. Associations between coverage levels and characteristics were measured using 95% confidence intervals. Persons with high-risk conditions had one or more of the following: ever being

told by a physician they had diabetes, emphysema, coronary heart disease, angina, heart attack, or other heart condition; receiving a diagnosis of cancer during the preceding 12 months (excluding nonmelanoma skin cancer) or ever being told by a physician they had lymphoma, leukemia, or blood cancer; being told by a physician during the preceding 12 months they had chronic bronchitis or weak or failing kidneys; or having an asthma episode or attack during the preceding 12 months.

In 2003, influenza vaccination levels varied by age group, race/ethnicity, presence of high-risk medical conditions, and other characteristics. Coverage among persons aged  $\geq 65$  years was 65.6%. Racial/ethnic-specific estimates of coverage were 68.7% for non-Hispanic whites, 48.0% for non-Hispanic blacks, and 45.4% for Hispanics (Table 1). Combining the three racial/ethnic populations, the following characteristics were associated with lower coverage levels: age 65–74 years, less than a high school education, income below the poverty threshold, no supplemental health insurance, no high-risk conditions, and fewer doctor visits in the preceding 12 months. Among persons aged 18–64 years with high-risk conditions, influenza vaccination coverage was 34.1% (Table 2). Racial/ethnic-specific estimates of coverage among persons aged 18–64 years with high-risk conditions were 35.8% for non-Hispanic whites, 30.4% for non-Hispanic blacks, and 27.0% for Hispanics. Characteristics associated with lower coverage levels in the combined racial/ethnic groups were age 18–49 years, less than high school education, income near (100%–199%) or below (<100%) the poverty threshold, no health insurance, and fewer doctor visits during the preceding 12 months. Among Hispanics aged  $\geq 18$  years, those who were interviewed in Spanish had a vaccination coverage level that was nearly two thirds the level for those interviewed in English. Among persons aged 50–64 years, influenza vaccination coverage was 46.3% for persons with high-risk conditions and 32.7% for persons without high-risk conditions.

Trends over time differed by race/ethnicity and age group. During 1989–1997, among persons aged  $\geq 65$  years, influenza vaccination coverage among non-Hispanic whites increased from 32.1% in 1989 to 66.0% in 1997, then remained nearly stable through 2003 except for a limited decrease in 2001 (Figure). At a lower level of coverage, a similar pattern existed among non-Hispanic blacks. Among Hispanics, however, vaccination coverage declined from 55.7% in 2000 to 45.4% in 2003, and the gap in vaccination rates between Hispanics and non-Hispanic whites increased from 10.9% to 23.3% during the same period.

Among all persons aged 18–64 years (with and without high-risk conditions), influenza vaccination coverage increased from

5.0% in 1989 to 22.1% in 2003, except for a limited decrease in 2001. Among persons aged 18–64 years with high-risk conditions, a similar trend was observed during 1997–2003.

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**Editorial Note:** The findings in this report indicate that influenza vaccination coverage since 2000 has increased only slightly among non-Hispanic whites and non-Hispanic blacks aged  $\geq 65$  years and among younger adults with high-risk conditions and decreased among Hispanics aged  $\geq 65$  years. Given these trends, the national health targets for influenza vaccination coverage of 90% for persons aged  $\geq 65$  years and 60% for persons aged 18–64 years with one or more high-risk condition will not be met by 2010. In addition, racial/ethnic disparities in coverage levels were observed, with lower coverage among non-Hispanic blacks and Hispanics than among non-Hispanic whites of both targeted populations. These disparities underscore the need to implement more widespread effective interventions (e.g., standing orders and provider and patient reminders), especially among certain racial/ethnic populations, to achieve national objectives for influenza vaccination coverage among persons aged  $\geq 65$  years and persons aged 18–64 years with high-risk conditions.

Multiple characteristics continue to be associated with lower influenza vaccination coverage and poor progress toward the national health objectives, including low household income, less than a high school education, less health insurance coverage, and fewer doctor visits. One study determined a stronger association between opposition to vaccination and lower influenza vaccination coverage among non-Hispanic blacks than other groups (5). Low coverage might be related, in part, to how non-Hispanic blacks respond to prevention messages and guidelines (6). Among Hispanics, those who were interviewed in Spanish had lower vaccination coverage than those interviewed in English, indicating that a greater availability of Spanish-speaking health-care providers and communication materials in Spanish might help to achieve higher coverage in the Hispanic population. Among Hispanics aged  $\geq 65$  years, reasons for the decline in coverage, beginning in 2001, are not known; however, the decline was observed primarily among Hispanics who were interviewed in Spanish (CDC, unpublished data, 2005). Research is needed to gain insight into the causes of this pattern and reverse it.

Although a leveling of influenza vaccination coverage has been observed since 1998, the instability of the vaccine sup-

**TABLE 1. Number in sample\* and percentage† of non-Hispanic white, non-Hispanic black, and Hispanic persons aged ≥65 years who reported receiving influenza vaccination during the preceding 12 months, by selected characteristics — National Health Interview Survey, United States, 2003**

Characteristic	White, non-Hispanic			Black, non-Hispanic			Hispanic			Total		
	No. in sample	%	(95% CI <sup>§</sup> )	No. in sample	%	(95% CI)	No. in sample	%	(95% CI)	No. in sample	%	(95% CI)
Total	4,401	68.7	(±1.5)	609	48.0	(±4.6)	528	45.4	(±5.2)	5,538	65.6	(±1.4)
Sex												
Men	1,659	69.2	(±2.3)	208	48.2	(±7.6)	193	41.8	(±7.7)	2,060	66.0	(±2.1)
Women	2,742	68.3	(±2.1)	401	47.8	(±5.5)	335	48.1	(±7.5)	3,478	65.2	(±1.9)
Age group (yrs)												
65–74	2,123	64.1	(±2.1)	341	42.0	(±6.0)	326	42.2	(±5.8)	2,790	60.5	(±1.9)
≥75	2,278	73.6	(±2.2)	268	55.5	(±7.2)	202	51.4	(±10.3)	2,748	71.2	(±2.1)
Region <sup>¶</sup>												
Northeast	970	69.1	(±3.5)	96	43.7	(±11.7)	63	48.6	(±17.9)	1,129	66.7	(±3.5)
Midwest	1,134	68.1	(±2.8)	120	42.2	(±9.0)	20	—**	—	1,274	65.9	(±2.6)
South	1,518	68.9	(±2.5)	335	51.6	(±6.4)	244	43.4	(±8.0)	2,097	64.9	(±2.2)
West	779	68.6	(±3.9)	58	44.2	(±10.8)	201	48.7	(±6.8)	1,038	65.0	(±3.3)
Education												
Less than high school graduate	1,016	63.1	(±3.4)	317	46.9	(±6.5)	336	44.7	(±6.1)	1,669	58.0	(±2.8)
High school graduate	1,577	70.3	(±2.6)	122	42.5	(±9.2)	97	42.0	(±11.2)	1,796	67.9	(±2.5)
More than high school graduate	1,752	71.1	(±2.5)	153	54.2	(±8.4)	81	50.3	(±12.3)	1,986	69.6	(±2.3)
Poverty threshold (%)												
Above (≥200)	1,738	72.3	(±2.2)	133	46.8	(±9.6)	101	52.9	(±11.5)	1,972	70.3	(±2.1)
Near (100–199)	797	67.7	(±3.7)	146	54.8	(±8.9)	129	44.3	(±11.0)	1,072	64.3	(±3.3)
Below (<100)	283	59.5	(±6.6)	127	48.7	(±9.7)	129	38.5	(±9.7)	539	53.9	(±5.1)
Language <sup>††</sup>												
English	4,372	68.9	(±1.5)	606	47.9	(±4.6)	257	55.5	(±8.0)	5,235	66.6	(±1.4)
Spanish	29	—**	—	3	—**	—	271	35.4	(±6.8)	303	37.1	(±6.7)
Health insurance												
Medicare only	929	61.8	(±3.6)	229	46.4	(±8.6)	205	47.9	(±8.2)	1,363	58.2	(±3.1)
Medicare and Medicaid	194	57.8	(±7.9)	101	47.0	(±10.7)	127	51.7	(±10.6)	422	54.1	(±5.5)
Medicare and supplemental <sup>§§</sup>	2,996	72.1	(±1.8)	192	52.4	(±7.7)	88	54.0	(±12.4)	3,276	71.0	(±1.7)
With high-risk conditions <sup>¶¶</sup>												
Yes	2,068	73.5	(±2.1)	282	52.4	(±6.3)	219	56.6	(±8.9)	2,569	70.9	(±2.0)
No	2,311	64.3	(±2.2)	323	43.9	(±5.5)	308	38.3	(±6.1)	2,942	60.8	(±1.9)
No. of doctor visits***												
0–1	686	50.9	(±4.3)	89	28.2	(±11.1)	118	29.9	(±9.8)	893	47.5	(±3.9)
2–5	1,827	67.5	(±2.3)	249	44.4	(±7.2)	192	45.0	(±8.8)	2,268	64.4	(±2.2)
≥6	1,822	76.5	(±2.1)	261	58.5	(±6.7)	213	55.2	(±8.4)	2,296	73.6	(±2.0)

\* Unweighted sample sizes.

† Weighted proportions.

§ Confidence interval.

¶ Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

\*\* Sample size insufficient for analysis (<30 sampled respondents or relative standard error >0.3).

†† Language in which the interview was conducted.

§§ Any health insurance in addition to Medicare, including private health insurance, except Medicaid.

¶¶ Persons reported one or more of the following: ever being told by a physician they had diabetes, emphysema, coronary heart disease, angina, heart attack, or other heart condition; receiving a diagnosis of cancer during the preceding 12 months (excluding nonmelanoma skin cancer) or ever being told by a physician they had lymphoma, leukemia, or blood cancer; being told by a physician during the preceding 12 months they had chronic bronchitis or weak or failing kidneys; or having an asthma episode or attack during the preceding 12 months.

\*\*\* During the preceding 12 months.

**TABLE 2. Number in sample\* and percentage† of non-Hispanic white, non-Hispanic black, and Hispanic persons aged 18–64 years with high-risk§ conditions who reported receiving influenza vaccination during the preceding 12 months, by selected characteristics — National Health Interview Survey, United States, 2003**

Characteristic	White, non-Hispanic			Black, non-Hispanic			Hispanic			Total		
	No. in sample	%	(95% CI)¶	No. in sample	%	(95% CI)	No. in sample	%	(95% CI)	No. in sample	%	(95% CI)
Total	2,872	35.8	(±1.9)	663	30.4	(±3.9)	703	27.0	(±3.9)	4,238	34.1	(±1.7)
Sex												
Men	1,188	35.9	(±3.0)	231	28.1	(±6.9)	272	29.4	(±6.0)	1,691	34.3	(±2.6)
Women	1,684	35.7	(±2.5)	432	32.1	(±5.6)	431	25.1	(±4.7)	2,547	34.0	(±2.2)
Age group (yrs)												
18–49	1,466	24.9	(±2.5)	378	24.3	(±5.4)	433	20.0	(±4.8)	2,277	24.1	(±2.1)
50–64	1,406	47.9	(±3.0)	285	39.7	(±6.6)	270	39.7	(±7.2)	1,961	46.3	(±2.7)
Region**												
Northeast	520	33.4	(±4.1)	95	39.3	(±11.4)	125	41.6	(±9.1)	740	34.8	(±3.6)
Midwest	791	36.2	(±3.2)	155	34.0	(±6.9)	59	19.9	(±9.7)	1,005	35.3	(±3.3)
South	1,051	36.7	(±3.1)	363	26.7	(±5.4)	229	24.5	(±7.5)	1,643	33.7	(±2.7)
West	510	35.8	(±5.3)	50	31.2	(±11.4)	290	24.7	(±5.5)	850	32.7	(±4.1)
Education												
Less than high school graduate	341	29.3	(±5.3)	163	29.9	(±7.2)	298	25.9	(±6.6)	802	28.5	(±3.7)
High school graduate	850	34.3	(±3.5)	180	24.3	(±7.2)	154	27.7	(±8.6)	1,184	32.5	(±3.0)
More than high school graduate	1,656	38.1	(±2.5)	314	34.1	(±6.3)	241	28.0	(±6.6)	2,211	36.9	(±2.3)
Poverty threshold (%)												
Above (≥200)	1,570	36.7	(±2.5)	244	31.7	(±7.0)	205	38.3	(±8.3)	2,019	36.3	(±2.3)
Near (100–199)	405	32.2	(±5.3)	114	28.5	(±9.8)	156	20.0	(±7.1)	675	29.7	(±4.1)
Below (<100)	330	28.3	(±5.8)	151	28.0	(±8.0)	166	25.8	(±8.0)	647	27.8	(±4.2)
Language††												
English	2,859	35.9	(±1.9)	663	30.4	(±3.9)	422	30.4	(±5.1)	3,944	34.8	(±1.7)
Spanish	13	—§§	—	0	—§§	—	281	21.2	(±5.7)	294	20.9	(±5.6)
Health insurance												
Yes	2,499	38.2	(±2.1)	524	34.0	(±4.7)	484	33.4	(±4.9)	3,507	37.3	(±1.9)
No	370	18.9	(±4.6)	133	18.4	(±6.7)	216	12.5	(±5.3)	719	17.5	(±3.1)
No. of doctor visits¶¶												
0–1	456	16.5	(±3.7)	107	15.8	(±8.0)	183	18.7	(±7.0)	746	16.7	(±3.0)
2–5	1,074	35.6	(±3.2)	233	28.1	(±6.4)	242	21.2	(±5.9)	1,549	33.0	(±2.7)
>6	1,320	42.8	(±2.9)	317	39.2	(±6.3)	272	39.6	(±7.8)	1,909	42.0	(±2.5)

\* Unweighted sample sizes.

† Weighted proportions.

§ Persons reported one or more of the following: ever being told by a physician they had diabetes, emphysema, coronary heart disease, angina, heart attack, or other heart condition; receiving a diagnosis of cancer during the preceding 12 months (excluding nonmelanoma skin cancer) or ever being told by a physician they had lymphoma, leukemia, or blood cancer; being told by a physician during the preceding 12 months they had chronic bronchitis or weak or failing kidneys; or having an asthma episode or attack during the preceding 12 months.

¶ Confidence interval.

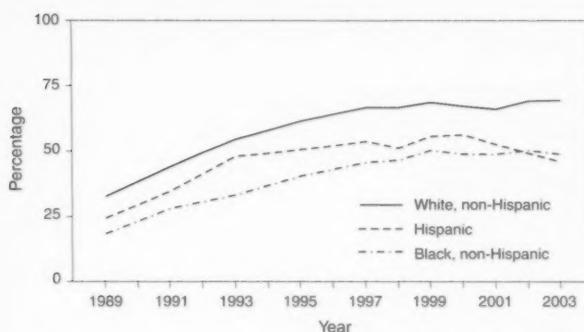
\*\* Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

†† Language in which the interview was conducted.

§§ Sample size insufficient for analysis (<30 sampled respondents or relative standard error >0.3).

¶¶ During the preceding 12 months.

**FIGURE.** Percentage of persons aged ≥65 years who reported receiving influenza vaccination during the preceding 12 months, by race/ethnicity and year — National Health Interview Survey, United States, 1989–2003



ply during recent years might have contributed to impeding progress toward the 2010 influenza vaccination targets. The decrease in coverage in 2001 likely was caused by the delayed supply of influenza vaccine during the 2000–01 influenza season (7). A less severe delay occurred during the 2001–02 season but did not result in a decrease in coverage. Progress will continue to be slowed if vaccine supply shortages such as that during the 2004–05 influenza season cannot be avoided (4). The effect of the vaccine shortage during the 2004–05 season on future demand for influenza vaccine, potentially as a result of reduced risk perception among persons who deferred vaccination, has yet to be determined. Continued surveillance for vaccination coverage is needed to assess the effects of fluctuations in available vaccine doses.

No national target for influenza vaccination coverage among persons aged 50–64 years exists; however, since 2000, the Advisory Committee on Immunization Practices (ACIP) has recommended influenza vaccination for all persons in this age group (8). Data from the 2003 NHIS indicate that coverage for persons with and without high-risk conditions in this age group remains below 50%. National health objectives for the group aged 50–64 years should be considered to help promote increased coverage.

The findings in this report are subject to at least four limitations. First, influenza vaccination status is self-reported and, therefore, subject to recall bias. However, a previous study has demonstrated that the sensitivity and specificity of self-reported influenza vaccination are high among adults (9). Second, a multivariable model was not used to adjust for potential confounding. Third, data for the 2003 NHIS are gathered from interviews conducted during the entire calendar year and primarily reflect the 2002–03 influenza season but also include

vaccinations occurring in smaller portions of the preceding and subsequent seasons, reducing specificity of coverage estimates. Finally, total coverage for each age group might not be generalizable to the entire U.S. population for those age groups because only three racial/ethnic populations were included in the analysis.

To further improve vaccination coverage among adults, ACIP recommends standing orders for influenza vaccination (10). In addition, a recent systematic review by the Task Force on Community Preventive Services recommends combining interventions to increase vaccination rates, such as 1) increasing community demand for vaccinations, 2) enhancing access to vaccination services, and 3) implementing provider-based or system-based interventions (3). Other factors that might help improve influenza vaccination coverage levels among persons aged ≥65 years and persons aged 18–64 years with high-risk conditions include stabilizing the vaccine supply for each influenza season and developing infrastructure to vaccinate uninsured persons aged 18–64 years with high-risk conditions.

#### References

- Hak E, Buskens E, van Essen GA, et al. Clinical effectiveness of influenza vaccination in persons younger than 65 years with high-risk medical conditions: the PRISMA study. *Arch Intern Med* 2005;165:274–80.
- US Department of Health and Human Services. Healthy people 2010: understanding and improving health. 2nd ed. Washington, DC: US Department of Health and Human Services; 2000. Available at <http://www.health.gov/healthypeople>.
- CDC. Improving influenza, pneumococcal polysaccharide, and hepatitis B vaccination coverage among adults aged <65 years at high risk: a report on recommendations of the Task Force on Community Preventive Services. *MMWR* 2005;54(No. RR-5).
- CDC. Estimated influenza vaccination coverage among adults and children—United States, September 1, 2004–January 31, 2005. *MMWR* 2005;54:304–7.
- Hebert PL, Frick KD, Kane RL, McBean AM. The causes of racial and ethnic differences in influenza vaccination rates among elderly Medicare beneficiaries. *Health Serv Res* 2005;40:517–37.
- Witt D, Brawer R, Plumb J. Cultural factors in preventive care: African-Americans. *Prim Care* 2002;29:487–93.
- CDC. Delayed supply of influenza vaccine and adjunct ACIP influenza vaccine recommendations for the 2000–01 influenza season. *MMWR* 2000;49:619–22.
- CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2005;54(No. RR-8):10.
- Mac Donald R, Baken L, Nelson A, Nichol KL. Validation of self-report of influenza and pneumococcal vaccination status in elderly outpatients. *Am J Prev Med* 1999;16:173–7.
- CDC. Adult immunization programs in nontraditional settings: quality standards and guidance for program evaluation—a report of the National Vaccine Advisory Committee and Use of standing orders programs to increase adult vaccination rates: recommendations of the Advisory Committee on Immunization Practices. *MMWR* 2000;49 (No. RR-1):15–26.

## Influenza Vaccination in Pregnancy: Practices Among Obstetrician-Gynecologists — United States, 2003–04 Influenza Season

Women infected with influenza virus during pregnancy are at increased risk for serious complications and hospitalization (1). During 1997–2003, the Advisory Committee on Immunization Practices (ACIP) included healthy pregnant women who would be in their second or third trimester of pregnancy during the influenza season among those persons at high risk for whom influenza vaccination was indicated (2). Also included were women at any stage of pregnancy with certain chronic medical conditions, such as asthma, diabetes mellitus, or heart disease (2). ACIP emphasized that the influenza vaccine was safe for breastfeeding mothers and their infants and that household contacts of children aged <2 years also should be vaccinated (2). However, despite these recommendations, only 13% of pregnant women received influenza vaccination in 2003 (3). To assess understanding of the ACIP recommendations among obstetrician-gynecologists (OB/GYNs), the American College of Obstetricians and Gynecologists (ACOG), with support from CDC, surveyed a national sample of OB/GYNs in May 2004. This report describes the results of that survey, which indicated that 52% of OB/GYNs surveyed would recommend influenza vaccination for a healthy woman in the first trimester of pregnancy, 95% would recommend the vaccine for a healthy pregnant woman beyond the first trimester, and 63% would recommend vaccination for a woman with a medical condition in the first trimester. However, of the physicians who would recommend vaccination, 36%–38% reported that influenza vaccination was not offered in their practices. Increased efforts are needed to improve vaccine availability and to educate OB/GYNs regarding the updated ACIP recommendations on the use of influenza vaccine in the first trimester for both healthy pregnant women and pregnant women at high risk.

In May 2004, ACOG mailed surveys to a random sample of 1,000 OB/GYNs who had current membership in ACOG. A second mailing was sent approximately 1 month after the first to physicians who had failed to respond. Physicians were asked about their approaches toward recommending and providing influenza vaccination for pregnant and postpartum women during the 2003–04 influenza season, a season with no shortage in vaccine supply. Physicians were asked to indicate their approach to influenza vaccination for four patient scenarios involving women in their practices (Table).

**TABLE. Percentage of obstetrician-gynecologists who reported their approach to influenza vaccination among pregnant and breastfeeding women, based on their understanding of the 2003 Advisory Committee on Immunization Practices (ACIP) recommendations, by patient type — United States, 2003–04 influenza season**

Patient type	%*	(95% CI) <sup>†</sup>
Healthy woman in the 1st trimester of pregnancy seen in November (n = 412)		
Recommend	52	(47–56)
<i>But not offered in my practice</i>	38	(32–45)
Do not recommend	47	(42–52)
Don't know	2	(1–4)
Healthy woman in 2nd and 3rd trimester of pregnancy seen in November (n = 413)		
Recommend	95	(93–97)
<i>But not offered in my practice</i>	36	(31–41)
Do not recommend	4	(3–7)
Don't know	1	(0–3)
Woman with diabetes in 1st trimester of pregnancy seen in November (n = 411)		
Recommend	63	(59–68)
<i>But not offered in my practice</i>	37	(32–43)
Do not recommend	32	(28–37)
Don't know	4	(3–7)
Healthy woman who has a child aged 3 months and is breastfeeding (n = 408)		
Recommend	63	(59–68)
<i>But not offered in my practice</i>	38	(32–44)
Do not recommend	22	(18–26)
Don't know	15	(12–19)

\* Percentages might not add up to 100% because of rounding.

† Confidence interval.

In addition, physicians were asked whether they had seen pregnant patients whom they suspected had influenza and how often they tested these patients for influenza during the 2003–04 influenza season. Respondent demographic and practice-setting data also were collected. Exact binomial confidence intervals (CIs) were calculated.

Completed surveys were received from 515 OB/GYNs (response rate: 52%). Respondents who had not seen obstetric patients during the 2003–04 influenza season were excluded (n = 102). A total of 413 OB/GYNs constituted the final sample. Median age of respondents included in the analysis was 45.8 years (range: 30–72 years); 56% of respondents were male. However, not all 413 physicians responded to each question.

Among the OB/GYNs included in the analysis, 212 (52%) reported that they would recommend influenza vaccination to a healthy pregnant woman in the first trimester seen during the influenza season; of these, 81 (38%) reported that the vaccine was not offered by their practice. A total of 391 (95%) reported that they would recommend vaccination for a healthy pregnant woman in the second or third trimester, but 140 (36%) of these did not offer influenza vaccination in their

practices. For a woman with diabetes who was in the first trimester of pregnancy, 260 (63%) reported that they would recommend influenza vaccination; of these, 97 (37%) indicated that the vaccine was not offered by their practices. Whereas 259 (63%) respondents reported that they would recommend influenza vaccination to a healthy postpartum woman who is breastfeeding, 98 (38%) indicated that the vaccine was not offered by their practice.

Of the OB/GYNs who completed the survey, 243 (59%) reported seeing pregnant women in their practice whom they suspected of having influenza during the 2003–04 influenza season. However, of these, 203 (84%) reported that they rarely or never tested pregnant women for influenza.

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**Editorial Note:** The results of this study indicated that 52% of OB/GYNs supported the use of influenza vaccination during pregnancy in the first trimester for healthy women, 95% supported use in the second and third trimesters, and 63% reported that they would recommend vaccination to women with diabetes who were at any stage of pregnancy and to women who were breastfeeding. Nearly half of physicians reported that they would not recommend influenza vaccination for a healthy woman during the first trimester of pregnancy. This pattern is consistent with the 2003 ACIP recommendations, in place at the time of this survey, that acknowledged vaccination after 14 weeks' gestation and beyond as preferred by many providers for women without other underlying high-risk conditions, to avoid coincidental association with spontaneous abortions, which are common in the first trimester (2). In May 2004, after the survey was conducted, ACIP published simplified recommendations, which stated that vaccination is recommended in any trimester for healthy pregnant women and pregnant women with high-risk medical conditions (4). Whereas physicians frequently recommended influenza vaccination to pregnant women, vaccination often was not available in their practices. Although the reasons for not offering influenza vaccination in their practices were not explored, a study of OB/GYNs identified inadequate reimbursement, lack of vaccine infor-

mation for patients, and liability concerns as main barriers to vaccination of pregnant women among physicians who did not offer influenza vaccination in their practices (5). These findings underscore the need to improve influenza vaccine availability and use for both healthy pregnant women and pregnant women at high risk.

The majority of OB/GYNs who reported examining a pregnant woman whom they suspected had influenza did not confirm the diagnosis through laboratory testing. Reasons for not testing for influenza were not explored in this survey but might include cost, unfamiliarity with laboratory testing, lack of availability of the test in the office setting, concern about the estimated low sensitivity of rapid testing (6), lack of familiarity with antiviral medications (e.g., amantadine, rimantadine, and oseltamivir), or the paucity of data on effects of antiviral medications on the fetus. A laboratory diagnosis might improve the identification of influenza on a population level, making physicians aware of the presence of influenza virus in their area and helping them define treatment choices. However, because of the unknown effects of antiviral drugs on pregnant women and their fetuses, these agents are recommended for use during pregnancy only when the potential benefits outweigh the potential risks (2,7).

The findings in this report are subject to at least three limitations. First, data were self-reported and are subject to social desirability bias. Second, the response rate was 52%, so results might not be representative of all practicing OB/GYNs. Third, the survey did not assess why physicians did not offer the vaccine in their practices. Finally, physicians were surveyed after the 2003–04 influenza season; therefore, results reflect practice at that time and do not reflect changes that might have occurred in physician practices after the ACIP updated interim influenza vaccination recommendations and during the limited availability of the vaccine for the 2004–05 influenza season.

Evaluation efforts are needed to assess knowledge and practices of OB/GYNs since the updated 2004–05 ACIP recommendations, which added recommendations for pregnant women in the first trimester. Pregnant women infected with influenza virus are at risk for serious medical complications that are potentially preventable with influenza vaccination (8). In addition, postpartum vaccination of women is an important means of protecting young infants from influenza, particularly because children <6 months are at high risk for influenza-related complications but cannot be vaccinated themselves (9). CDC and ACOG will continue to monitor influenza vaccine use among pregnant women and the knowl-

edge and practices of OB/GYNs regarding vaccine recommendations.

Educational materials for both physicians and pregnant women, such as those that have been successful for other obstetric concerns (10), regarding the risk for influenza complications for pregnant women and children aged <6 months and the use of influenza vaccine for pregnant, postpartum, and breastfeeding women are needed to increase influenza vaccination coverage among these women. In November 2004, the ACOG Committee on Obstetrics Practice published and disseminated to its members a document encouraging use of the ACIP recommendations for vaccination of pregnant women at any stage of pregnancy (7). ACOG recently created a task force on immunizations that will address access to vaccinations in OB/GYN offices. Further research is needed to determine effective strategies for increasing influenza vaccine availability in the obstetrics-gynecology setting. OB/GYNs can play a pivotal role in helping to protect women and newborns from this vaccine-preventable disease. Achieving optimal compliance with current recommendations is important for reducing maternal and infant morbidity from influenza.

#### References

1. Neuzil KM, Reed GW, Mitchel EF, Simonsen L, Griffin MR. Impact of influenza on acute cardiopulmonary hospitalizations in pregnant women. *Am J Epidemiol* 1998;148:1094–102.
2. CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2003;52(No. RR-8):7–10.
3. CDC. National Health Interview Survey—2003. Table: Self-reported influenza vaccination coverage trends 1989–2003 among adults by age group, risk group, race/ethnicity, health-care worker status, and pregnancy status, United States, National Health Interview Survey. Available at <http://www.cdc.gov/flu/professionals/vaccination/pdf/vaccinetrend.pdf>.
4. CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2004;53(No. RR-6).
5. Schrag SJ, Fiore AE, Gonik B, et al. Vaccination and perinatal infection prevention practices among obstetrician-gynecologists. *Obstet Gynecol* 2003;101:704–10.
6. Montalto NJ. An office-based approach to influenza: clinical diagnosis and laboratory testing. *Am Fam Physician* 2003;67:1111–8.
7. American College of Obstetricians and Gynecologists. Influenza vaccination and treatment during pregnancy. ACOG committee opinion no. 305. *Obstet Gynecol* 2004;104:1125–6.
8. Irving WL, James DK, Stephenson T, et al. Influenza virus infection in the second and third trimesters of pregnancy: a clinical and seroepidemiologic study. *Br J Obstet Gynaecol* 2000;107:1282–9.
9. Sumaya CV, Gibbs RS. Immunization of pregnant women with influenza A/New Jersey/76 virus vaccine: reactogenicity and immunogenicity in mother and infant. *J Infect Dis* 1979;140:141–6.
10. CDC. Early-onset group B streptococcal disease—United States, 1998–1999. MMWR 2000;49:793–6.

#### Ralstonia Associated with Vapotherm Oxygen Delivery Device — United States, 2005

In August 2005, a health-care facility in Pennsylvania reported the occurrence of *Ralstonia* spp. in six patients aged 21 days to 8 years to the Philadelphia Department of Health and CDC. Preliminary laboratory and epidemiologic investigation identified the Vapotherm 2000i oxygen delivery device (Vapotherm Inc., Stevensville, Maryland) as an associated risk factor for recovery of the organism from blood and respiratory tract samples. Although the source of *Ralstonia* has not yet been identified, Vapotherm has created new infection-control procedures to reduce the risk for infectious disease transmission among patients using their machines. This report summarizes the initial results of this ongoing investigation and provides recommendations to prevent further spread of *Ralstonia* species in hospitals.

The Vapotherm device is capable of delivering high concentrations of medical gases, such as oxygen, via nasal cannula. Breathing gas is distributed alongside a discrete water chamber, where it is warmed and humidified and then delivered to the patient. The machine employs a reusable 0.01- $\mu$  cartridge filter, which should prevent passage of bacterial microorganisms from the water chamber to the air compartment. Approximately 4,500 Vapotherm units are in service in the United States. *Ralstonia* species are gram-negative bacilli that grow well in moist environments and are an infrequent cause of colonization and infection in humans. Although ubiquitous in the environment, the organism is rarely found in hospitals. *Ralstonia* spp. have traditionally exhibited low virulence in humans but have been implicated in several nosocomial outbreaks involving contaminated solutions (1–3).

Surveillance performed through pediatric and neonatology electronic mail listserv groups identified 10 hospitals in seven states that have recovered *Ralstonia* species from clinical specimens and/or Vapotherm devices. During January–September 2005, a total of 18 pediatric patients with positive *Ralstonia* respiratory or blood cultures were reported from five hospitals in five states. Investigations to determine which cases represent infections (as opposed to colonization) are ongoing. Seventeen of these patients were exposed to a Vapotherm system before culture specimens were obtained. Four of the 10 hospitals cultured the organism from Vapotherm systems and reusable filter cartridges after they had been disinfected according to the manufacturer's previously recommended reprocessing protocol. Whether the remaining six hospitals

followed Vapotherm's recommended reprocessing protocol is unclear. Failure to reprocess the system properly might have allowed development of a biofilm, which the previous reprocessing protocol did not address.

In response to this investigation, Vapotherm has developed new infection-control guidelines. Vapotherm continues to recommend that machines be reprocessed after each patient use or every 30 days if a single patient uses the device. Furthermore, the company now advises that each filter cartridge either be used for a single patient or be subjected to the new high-level disinfection reprocessing protocol. Moreover, the suggested maximum service life of the filter cartridge now is 60 cumulative days. Finally, Vapotherm now recommends use of sterile water in the delivery circuit, instead of following previous guidelines, which allowed use of tap water.

CDC recommends that users of the Vapotherm device follow the manufacturer's recommendations. More information on the new reprocessing protocol is available at <http://www.vtherm.com/customers/infectioncontrol.asp>. CDC also encourages health-care facilities to adhere to strict infection-control practices while administering respiratory therapy to prevent transmission of organisms such as *Ralstonia* spp. that thrive in warm, moist environments. Information on appropriate infection-control procedures is available at <http://www.cdc.gov/ncidod/hip/pneumonia/default.htm>.

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#### References

1. Labarca JA, Trick WE, Peterson CL, et al. A multistate nosocomial outbreak of *Ralstonia pickettii* colonization associated with an intrinsically contaminated respiratory care solution. Clin Infect Dis 1999;29:1281-6.
2. Maroye P, Doermann HP, Rogues AM, Gachie JP, Megraud F. Investigation of an outbreak of *Ralstonia pickettii* in a paediatric hospital by RAPD. J Hosp Infect 2000;44:267-72.
3. Moreira BM, Leobons MB, Pellegrino FL, et al. *Ralstonia pickettii* and *Burkholderia cepacia* complex bloodstream infections related to infusion of contaminated water for injection. J Hosp Infect 2005;60:51-5.

## Poliovirus Infections in Four Unvaccinated Children — Minnesota, August–October 2005

On October 14, this report was posted as an MMWR Dispatch on the MMWR website (<http://www.cdc.gov/mmwr>).

On September 29, 2005, the Minnesota Department of Health (MDH) identified poliovirus type 1 in an unvaccinated, immunocompromised infant girl aged 7 months (the index patient) in an Amish community whose members predominantly were unvaccinated for polio. The patient has no paralysis; the source of the patient's infection is unknown. Subsequently, poliovirus infections in three other children within the index patient's community have been documented. This report summarizes the ongoing investigation, provides information regarding poliovirus exposure risks and prevention measures in the United States, and offers recommendations to state health departments and clinicians.

#### Index Case Summary

The index patient was first admitted to a community hospital in central Minnesota for pneumonia in July 2005. Since August 22, this infant has been hospitalized continuously at three additional hospitals with failure to thrive, diarrhea, and recurrent infections. The infant was placed in strict isolation, and a diagnosis of severe combined immunodeficiency (SCID) was made on September 15. The infant is being clinically managed with intravenous immunoglobulin therapy and is being evaluated for bone marrow transplantation.

#### Laboratory Investigation

An enterovirus isolate from a stool specimen obtained on August 27, 2005, tested positive for a type 1 poliovirus at the MDH laboratory. Partial sequencing of the virus capsid protein coding region (VP1) of the poliovirus genome at the MDH laboratory identified it as a vaccine-derived poliovirus (VDPV). VDPVs are poliovirus strains derived from one of the three Sabin poliovirus strains in oral polio vaccine (OPV) that have  $\geq 1\%$  difference in nucleotide sequence from the prototype vaccine virus (1). Additional sequencing of the entire poliovirus genome at the CDC polio laboratory confirmed that this strain was a VDPV, with 2.3% divergence in the VP1 region from the parent Sabin type 1 strain. The viral genome demonstrates no recombination with other polioviruses or species C enteroviruses. Prospective serial stool samples from the infant are being tested to monitor ongoing infection and further mutations in the virus.

## Epidemiologic Investigation

Because viral genomic data suggest this poliovirus might have been transmitted to the index patient from another immunocompromised person, the initial investigation focused on identifying immunodeficient persons among community contacts, health-care workers, and patients with whom the infant had potential contact before the first positive poliovirus culture on August 27. Staff and patient records at the hospitals are being reviewed, and inquiries are being made with community members and health-care providers.

Investigations also are under way at the four hospitals where the infant has been treated to determine whether nosocomial transmission from the infant has occurred. At the hospital where the infant currently is a patient, health-care workers and other staff members who have had exposure (without protection from contact precautions) to the infant or the infant's environment are being surveyed regarding polio vaccination status, immune status, and recent relevant illnesses in themselves and their family members. Stool samples are being obtained for viral cultures. Vaccination with inactivated polio vaccine (IPV) is being offered to health-care workers who might have been exposed or who have an ongoing risk for exposure and whose polio vaccination status is not up to date or is unknown. Stool specimens also are being obtained from potentially exposed patients at the hospital where the infant currently is a patient. At the first three hospitals where the infant was admitted, health-care workers are being surveyed regarding immune status and recent illness in themselves or their family members.

To examine community transmission of poliovirus, family members and others in the index patient's community are being surveyed regarding polio vaccination status, immune status, and recent illnesses. To date, stool samples have been collected from 32 persons in five of 24 households, and serum samples have been obtained from eight persons in three households, including the index patient's household. Poliovirus type 1 has been confirmed in three of 32 stool specimens; partial sequencing of the VP1 region of these three isolates has indicated they also are VDPV type 1. The positive specimens were obtained from three unvaccinated siblings in one household (not the infant's household). None of these three children have been ill recently, and none were immunocompromised. Stool and serum samples are being requested from additional members of the community. Extended family members and community contacts from other areas who might have come into contact with the index patient are being identified and monitored for illness. IPV is being offered to community members who

are not fully vaccinated for polio or whose polio vaccination status is unknown. Hospitals that serve this community and similar communities are being contacted, and retrospective and prospective surveillance is identifying patients whose diagnoses indicate conditions that are clinically consistent with poliovirus infection, including acute flaccid paralysis (AFP), Guillain-Barré Syndrome (GBS), transverse myelitis, and viral or aseptic meningitis.

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**Editorial Note:** The findings in this report are the first identification of a VDPV in the United States and the first occurrence of VDPV transmission in a community since OPV vaccinations were discontinued in 2000 (2-4). The extent of circulation within the affected community is not yet known. However, the identification of poliovirus infection in the index patient and three other unvaccinated children in a community at high risk for poliovirus transmission raises concerns regarding 1) transmission to other communities with low levels of vaccination and 2) the risk for a polio outbreak occurring in the United States. Potential also exists for transmission of this virus to other immunodeficient persons. Although this VDPV has not been associated with paralytic disease, based on previous experience with VDPVs, the virus is considered to have potential both for wider transmission and for causing paralytic disease.

VDPVs emerge from OPV viruses as a result of 1) their continuous replication in immunodeficient persons (immunodeficiency-associated or iVDPVs) such as the index patient in this investigation or 2) their circulation in populations with low vaccination coverage (circulating or cVDPVs) (1). During community circulation, cVDPVs often recombine with other species C enteroviruses, which is not characteristic for iVDPVs (1). Because polioviruses accumulate nucleotide changes at a constant rate of mutation (approximately 1% per year), the time of replication can be inferred from the degree of divergence (1). Because cVDPVs commonly revert to a wild poliovirus phenotype, they can have increased transmissibility and high risk for paralytic disease; cVDPVs have caused outbreaks of poliomylitis in several countries (1). VDPVs in highly immunized populations are rare. Before the VDPV identification in Minnesota, the most recent known

VDPV excretor in the United States was a child with SCID (now deceased) who developed vaccine-associated paralytic poliomyelitis in 1995 (4).

Given the degree of difference (2.3%) from the parent Sabin poliovirus type 1 strain, the virus isolated from the index patient is estimated to have been replicating for approximately 2 years, which means the virus likely is older than the infant. OPV is still widely used in most countries; however, because OPV has not been used in the United States since 2000 and in Canada since 1997, the original source of this virus likely was a person who received OPV in another country. Neither the infant nor her family members had any history of international travel. This virus is not related to other known iVDPVs or to any type 1 cVDPVs that caused outbreaks such as those in Hispaniola during 2000–2001, the Philippines during 2001 (1), or Indonesia during 2005.

Most poliovirus infections are asymptomatic or cause mild, febrile disease. Poliovirus infections occasionally cause aseptic meningitis and one out of 200 infections from poliovirus type 1 results in paralytic poliomyelitis, characterized by acute onset of flaccid paralysis that is typically asymmetric and associated with a prodromal fever. Poliovirus is spread through fecal material, oral secretions, and fomites. Widespread transmission among vaccinated health-care workers or in a community with high vaccination coverage is unlikely because fully vaccinated persons are not at risk for disease from this or other polioviruses and seldom shed the virus for longer than a week if they are infected. The National Immunization Survey reports that polio vaccination coverage in Minnesota is 93% for children aged 19–35 months and 98% for school-aged children; however, communities of unvaccinated persons exist in Minnesota and many other states (5). The risk for transmission in communities with low vaccination coverage is high. The estimated rate of transmission for wild poliovirus among unvaccinated household contacts is 73%–96% (6). Contacts between persons in communities with low vaccination coverage pose the potential for transmission of this poliovirus to other communities in the United States, Canada, and other countries.

The last wild poliovirus outbreak in the United States occurred in 1979 and was caused by a wild type 1 poliovirus. In that outbreak, 10 paralytic poliomyelitis cases and four other poliovirus infections occurred among unvaccinated Amish persons and members of other religious communities with low levels of vaccination who lived in Iowa, Missouri, Pennsylvania, and Wisconsin. The source of this outbreak was traced to religious groups in Canada and the Netherlands that also had low levels of vaccination (7). A polio outbreak in 1993 in the Netherlands with 71 paralytic cases among members of

unvaccinated religious communities also resulted in poliovirus transmission without paralytic disease in Alberta, Canada; no evidence of transmission from this outbreak was found in the United States (8).

Persons in communities with low vaccination coverage should be warned of the potential risk for poliomyelitis. States with large communities with low vaccination coverage should identify these communities, assess their current vaccination status, and offer IPV. These states also should establish enhanced or active surveillance for AFP, GBS, and transverse myelitis. Physicians should be aware of and vigilant for poliomyelitis and other causes of AFP in patients. Stool samples, throat swabs, cerebrospinal fluid, and serum should be collected for viral culture and serology from these patients. With evidence of transmission in Minnesota, serologic and/or stool surveys to detect poliovirus type 1 circulation in affiliated communities with low levels of vaccination also should be considered.

IPV, the polio vaccine currently used in the United States, provides immunity against this vaccine-derived poliovirus strain. The Advisory Committee on Immunization Practices (ACIP) recommends that a full 3-dose IPV series be administered on an accelerated schedule if polio immunization status is unknown or not documented (9). A booster dose of IPV is recommended for adults in susceptible communities and health-care workers at high risk for exposure who have completed a primary series but have not received an adult booster dose.

#### References

1. Kew O, Wright P, Agol V, et al. Circulating vaccine-derived polioviruses: current state of knowledge. *Bull World Health Organ* 2004;82:16–23.
2. Halsey N, Pinto J, Espinosa-Rosales F, et al. Search for poliovirus carriers among people with primary immune deficiency diseases in the United States, Mexico, Brazil, and the United Kingdom. *Bull World Health Organ* 2004;82:3–8.
3. Kew O, Sutter R, Nottay B, et al. Prolonged replication of a type 1 vaccine-derived poliovirus in an immunodeficient patient. *J Clin Microbiol* 1998;36:2893–9.
4. Khetsuriani N, Prevots DR, Quick L, et al. Persistence of vaccine-derived polioviruses among immunodeficient persons with vaccine-associated paralytic poliomyelitis. *J Infect Dis* 2003;188:1845–52.
5. CDC. Estimated vaccination coverage with individual vaccines and selected vaccination series among children 19–35 months of age by state and immunization action plan area: US National Immunization Survey, 2004. Atlanta, GA: CDC; 2005. Available at: [http://www.cdc.gov/nip/coverage/nis/04/tabc02\\_antigen\\_iap.xls](http://www.cdc.gov/nip/coverage/nis/04/tabc02_antigen_iap.xls).
6. Zimmerman K, Middleton D, Burns I, Clover R. Routine vaccines across the life span, 2003 clinical review. *J Fam Pract* 2003;52 (suppl 1):s1–s21.
7. CDC. Epidemiologic notes and reports: poliomyelitis—United States, Canada. *MMWR* 1997;46:1194–5.
8. CDC. Current trends lack of evidence for wild poliovirus circulation—United States, 1993. *MMWR* 1995;43:957–9.
9. CDC. Poliomyelitis prevention in the United States. Updated recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2000;49(No. RR-5).

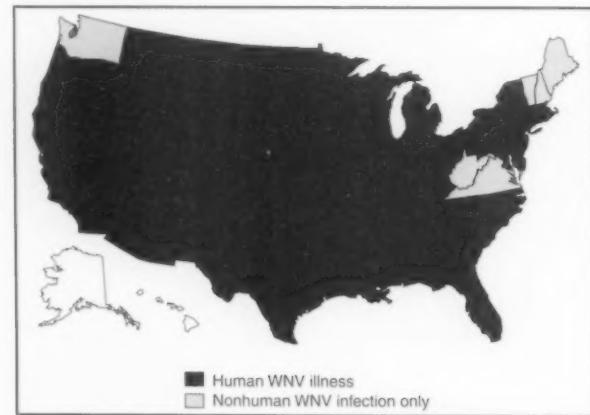
## Update: West Nile Virus Activity — United States, 2005

This report summarizes West Nile virus (WNV) surveillance data reported to CDC through ArboNET as of 3 a.m. Mountain Daylight Time, October 18, 2005.

Forty-two states have reported 2,316 cases of human WNV illness in 2005 (Figure and Table 1). By comparison, in 2004, a total of 2,151 WNV cases had been reported as of October 19, 2004 (Table 2). A total of 1,227 (57%) of the 2,163 cases for which such data were available in 2005 occurred in males; the median age of patients was 51 years (range: 3 months–98 years). Date of illness onset ranged from January 2 to October 11; a total of 66 cases were fatal.

A total of 364 presumptive West Nile viremic blood donors (PVDs) have been reported to ArboNET during 2005. Of these, 85 were reported from California; 54 from Texas; 52 from Nebraska; 22 from Louisiana; 20 from Arizona; 19 from Kansas; 17 from Iowa; 16 from South Dakota; 11 from Oklahoma; 10 from Minnesota; nine from Illinois; five each from Michigan, New Mexico, and North Dakota; four each from Alabama, Pennsylvania, and Utah; three each from Nevada and Wisconsin; two each from Colorado, Indiana, Mississippi, Montana, and Ohio; and one each from Idaho, Kentucky, Missouri, New York, North Carolina, and Oregon. Of the 364 PVDs, three persons aged 53, 56, and 72 years subsequently had neuroinvasive illness, seven persons (median age: 41 years; range: 17–64 years) subsequently had other illnesses, and 76 persons (median age: 46 years; range: 17–78 years) subsequently had West Nile fever.

**FIGURE. Areas reporting West Nile virus (WNV) activity — United States, 2005\***



\* As of October 18, 2005.

**TABLE 1. Number of human cases of West Nile virus (WNV) illness reported, by state — United States, 2005\***

State	Neuroinvasive disease†	West Nile fever‡	Other clinical/unspecified§	Total**	Deaths
Alabama	5	2	0	7	1
Arizona	25	33	30	88	3
Arkansas	8	13	0	21	0
California	247	448	76	771	16
Colorado	14	61	0	75	1
Connecticut	4	2	0	6	1
Delaware	1	0	2	3	0
Florida	6	13	0	19	0
Georgia	7	5	3	15	0
Idaho	2	7	4	13	0
Illinois	120	78	20	218	5
Indiana	7	0	8	15	1
Iowa	10	14	7	31	2
Kansas	6	2	0	8	0
Kentucky	4	0	0	4	1
Louisiana	58	23	0	81	6
Maryland	4	0	0	4	0
Massachusetts	4	1	0	5	0
Michigan	29	4	8	41	4
Minnesota	16	22	0	38	2
Mississippi	35	29	0	64	4
Missouri	11	10	0	21	1
Montana	8	17	0	25	0
Nebraska	19	49	0	68	1
Nevada	12	15	2	29	0
New Jersey	2	1	0	3	0
New Mexico	17	12	0	29	2
New York	8	4	0	12	1
North Carolina	2	1	0	3	0
North Dakota	11	72	0	83	0
Ohio	44	12	0	56	1
Oklahoma	4	5	0	9	0
Oregon	0	5	0	5	0
Pennsylvania	14	10	0	24	0
Rhode Island	1	0	0	1	0
South Carolina	4	0	0	4	1
South Dakota	34	192	4	230	2
Tennessee	11	1	0	12	1
Texas	70	42	0	112	6
Utah	19	26	0	45	1
Wisconsin	7	4	0	11	1
Wyoming	3	4	0	7	1
<b>Total</b>	<b>913</b>	<b>1,239</b>	<b>164</b>	<b>2,316</b>	<b>66</b>

\* As of October 18, 2005.

† Cases with neurologic manifestations (i.e., West Nile meningitis, West Nile encephalitis, and West Nile myelitis).

§ Cases with no evidence of neuroinvasion.

¶ Illnesses for which sufficient clinical information was not provided.

\*\* Total number of human cases of WNV illness reported to ArboNET by state and local health departments.

**TABLE 2. Comparison of human cases and deaths from West Nile virus — United States, 2002–2005**

Year	Human cases	Deaths
2002*	3,052	153
2003†	6,957	149
2004‡	2,151	68
2005§	2,316	66

\* As of October 16, 2002.

† As of October 15, 2003.

‡ As of October 19, 2004.

§ As of October 18, 2005.

In addition, 3,930 dead corvids and 831 other dead birds with WNV infection have been reported from 45 states. WNV infections have been reported in horses from 30 states; five dogs from Idaho, Minnesota, and Nebraska; four squirrels from Arizona; and five unidentified animal species in four states (Arizona, Illinois, North Carolina, and Texas). WNV seroconversions have been reported in 1,150 sentinel chicken flocks from 16 states. Eight seropositive sentinel birds have been reported from Michigan. One seropositive sentinel horse was reported from Minnesota. A total of 10,561 WNV-positive mosquito pools have been reported from 41 states and the District of Columbia.

Additional information about national WNV activity is available from CDC at <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm> and at <http://westnilemaps.usgs.gov>.

#### *Notice to Readers*

#### **Application Information for The CDC Experience**

The CDC Experience is a fellowship in applied epidemiology for medical students aimed at developing a pool of physicians with a greater understanding of evidence-based medicine and population health. Eight fellows spend 10–12 months at CDC in Atlanta, Georgia, where they conduct epidemiologic

analyses on public health topics that interest them. The fellowship environment provides multiple opportunities to enhance skills in research and analytic thinking, written and oral scientific presentation, and the practices of preventive medicine and public health. Graduates of The CDC Experience gain appreciation of the role of epidemiology in medicine and health and can apply their knowledge and skills to enhance their clinical acumen and help improve the quality of the U.S. health-care system.

Information on applying for The CDC Experience is available at <http://www.cdcfoundation.org/thecdexperience>. Applications for The CDC Experience fellowship class of 2006–07 must be postmarked by December 5, 2005. Questions should be addressed to Cathy McCarroll, program coordinator, by e-mail at [cmccarroll@cdc.gov](mailto:cmccarroll@cdc.gov).

#### **Errata: Vol. 54, No. 40**

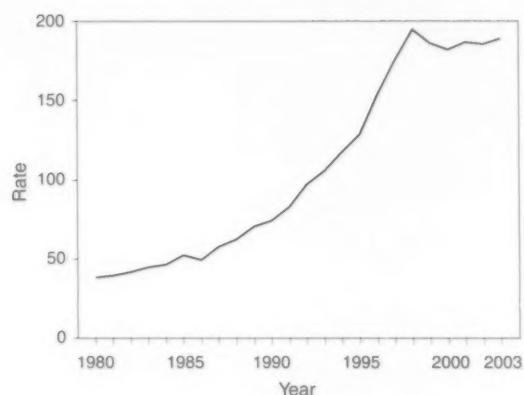
In the report, "Surveillance for Illness and Injury After Hurricane Katrina — New Orleans, Louisiana, September 8–25, 2005," callouts for reference nos. 1 and 2 should have been included on page 1018, in the third sentence of the first paragraph: "On September 9, 2005, LDHH, CDC, and functioning emergency treatment resources (i.e., hospitals, disaster medical assistance teams, and military aid stations) established an active surveillance system to detect outbreaks of disease and characterize post-hurricane injuries and illnesses (1,2)."

A callout for reference no. 7 should have been included on page 1020, in the fifth sentence of the second paragraph: "Investigation also indicated that the rash illnesses were noninfectious. Injury data (e.g., proportion of motor vehicle crashes, falls, bites, and CO poisonings) were used to guide prevention messages (e.g., flyers distributed at health-care facilities and at checkpoints for residents returning to hurricane-affected areas) (7)."

## QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

### Rate\* of Triplet and Other Higher-Order Multiple Births — United States, 1980–2003

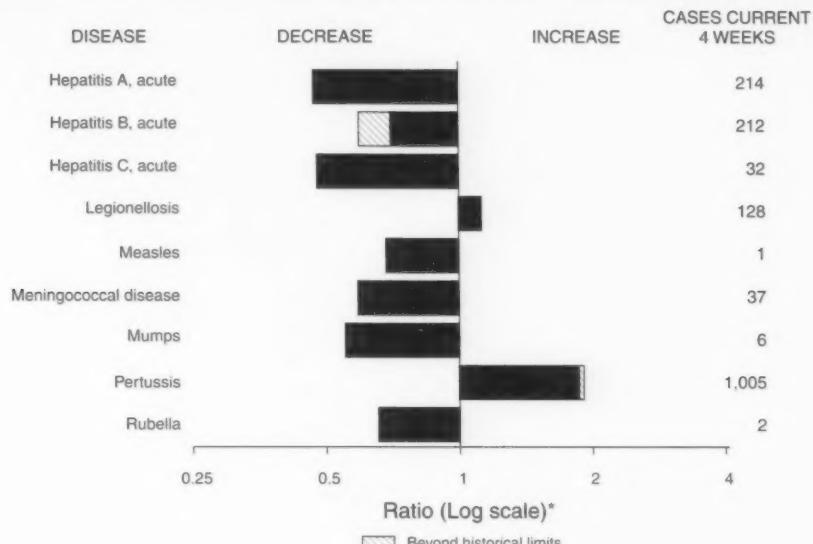


\* Per 100,000 live births.

The rate of triplet and other higher-order multiple births increased substantially, from 37 per 100,000 live births in 1980 to 194 in 1998, a trend largely attributable to increased usage of fertility therapies. During 1999–2003, the rate of triplet and higher-order multiple births has remained stable. Older mothers and non-Hispanic white mothers are the most likely to have a triplet or higher-order multiple birth.

**SOURCES:** Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F, Munson ML. Births: final data for 2003. National vital statistics reports, vol. 54, no. 2. Hyattsville, MD: National Center for Health Statistics; 2005. Available at [http://www.cdc.gov/nchs/data/nvsr/nvsr54/nvsr54\\_02.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr54/nvsr54_02.pdf); Reynolds MA, Schieve LA, Martin JA, et al. Trends in multiple births conceived using assisted reproductive technology, United States, 1997–2000. Pediatrics 2003;111:1159–66.

**FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals October 15, 2005, with historical data**



\* Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**TABLE I. Summary of provisional cases of selected notifiable diseases, United States, cumulative, week ending October 15, 2005 (41st Week)\***

Disease	Cum. 2005	Cum. 2004	Disease	Cum. 2005	Cum. 2004
Anthrax	—	—	Hemolytic uremic syndrome, postdiarrheal†	140	139
Botulism:			HIV infection, pediatric†	181	294
foodborne	12	8	Influenza-associated pediatric mortality***	44	—
infant	64	68	Measles	61††	25§§
other (wound & unspecified)	22	14	Mumps	228	170
Brucellosis	81	75	Plague	3	2
Chancroid	24	20	Poliomyelitis, paralytic	1	—
Cholera	4	4	Psittacosis†	18	11
Cyclosporiasis†	703	197	Q fever†	99	52
Diphtheria	—	—	Rabies, human	1	5
Domestic arboviral diseases			Rubella	13	9
(neuroinvasive & non-neuroinvasive):			Rubella, congenital syndrome	1	—
California serogroup† §	41	113	SARS† **	—	—
eastern equine† §	19	3	Smallpox†	—	—
Powassan† §	—	1	<i>Staphylococcus aureus</i> :		
St. Louis† §	7	13	Vancomycin-intermediate (VISA)†	—	—
western equine† §	—	—	Vancomycin-resistant (VRSA)†	—	1
Ehrlichiosis:	—	—	Streptococcal toxic-shock syndrome†	93	109
human granulocytic (HGE)†	434	327	Tetanus	16	18
human monocytic (HME)†	353	247	Toxic-shock syndrome	79	73
human, other and unspecified †	64	58	Trichinellosis††	15	2
Hansen disease†	58	76	Tularemia†	117	91
Hantavirus pulmonary syndrome†	17	18	Yellow fever	—	—

—: No reported cases.

\* Incidence data for reporting years 2004 and 2005 are provisional and cumulative (year-to-date).

† Not notifiable in all states.

§ Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNet Surveillance).

¶ Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention. Last update June 26, 2005.

\*\* Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases.

†† Of 61 cases reported, 51 were indigenous and 10 were imported from another country.

§§ Of 25 cases reported, eight were indigenous and 17 were imported from another country.

†† Formerly Trichinosis.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending October 15, 2005, and October 16, 2004  
(41st Week)\*

Reporting area	AIDS		Chlamydia†		Coccidioidomycosis		Cryptosporidiosis	
	Cum. 2005‡	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004
UNITED STATES	20,405	30,659	719,661	723,643	3,514	4,507	5,582	2,875
NEW ENGLAND	778	974	25,021	23,970	—	—	269	152
Maine	11	20	1,712	1,625	N	N	19	18
N.H.	20	36	1,433	1,359	—	—	28	27
Vt.¶	4	14	753	892	—	—	33	21
Mass.	368	337	11,276	10,598	—	—	114	56
R.I.	68	109	2,593	2,719	—	—	7	4
Conn.	307	458	7,254	6,777	N	N	68	26
MID. ATLANTIC	4,352	6,898	89,581	88,467	—	—	2,351	423
Upstate N.Y.	800	772	17,763	17,842	N	N	2,006	101
N.Y. City	2,327	3,892	28,652	27,291	—	—	93	111
N.J.	574	1,143	13,778	14,048	N	N	41	39
Pa.	651	1,091	29,388	29,286	N	N	211	172
E.N. CENTRAL	1,938	2,673	116,613	127,706	8	12	1,243	897
Ohio	312	504	31,298	31,416	N	N	679	191
Ind.	236	285	15,913	14,654	N	N	61	69
Ill.	983	1,267	34,691	37,584	—	—	99	137
Mich.	322	485	19,891	29,065	8	12	84	126
Wis.	85	132	14,820	14,987	N	N	320	374
W.N. CENTRAL	463	626	44,723	44,594	5	6	488	325
Minn.	123	148	8,873	9,352	3	N	108	109
Iowa	50	50	5,546	5,452	N	N	96	67
Mo.	198	267	17,645	16,460	1	3	221	59
N. Dak.	5	15	921	1,455	N	N	1	10
S. Dak.	10	8	2,202	1,966	—	—	23	33
Nebr.¶	18	44	4,041	4,081	1	3	7	24
Kans.	59	94	5,495	5,828	N	N	32	23
S. ATLANTIC	6,473	9,345	139,503	136,208	1	—	546	434
Del.	100	118	2,648	2,289	N	N	3	—
Md.	812	1,251	14,620	14,950	1	—	30	17
D.C.	467	621	3,085	2,807	—	—	10	14
Va.¶	307	506	16,668	17,810	—	—	52	49
W. Va.	36	63	2,096	2,231	N	N	12	5
N.C.	531	471	25,379	22,926	N	N	70	85
S.C.¶	386	534	17,055	14,746	—	—	15	20
Ga.	1,103	1,298	24,152	25,498	—	—	94	155
Fla.	2,731	4,483	33,800	32,951	N	N	260	109
E.S. CENTRAL	1,093	1,515	53,031	47,290	—	—	170	117
Ky.	135	183	6,976	4,494	N	N	120	37
Tenn.¶	434	617	18,955	17,764	N	N	30	32
Ala.¶	295	350	11,491	10,631	—	—	16	21
Miss.	229	365	15,609	14,401	—	5	4	27
W.S. CENTRAL	2,206	3,548	83,119	88,661	1	3	165	97
Ark.	72	175	6,878	6,374	—	1	4	13
La.**	436	704	12,572	17,757	1	2	73	3
Oklahoma	167	147	8,634	8,672	N	N	36	18
Tex.¶	1,531	2,522	55,035	55,858	N	N	52	63
MOUNTAIN	789	1,126	41,457	43,979	2,413	2,792	103	144
Mont.	4	5	1,569	1,925	N	N	16	34
Idaho¶	9	16	1,826	2,192	N	N	10	23
Wyo.	2	14	885	828	3	2	2	3
Colo.	163	247	10,576	11,239	N	N	38	49
N. Mex.	72	148	4,394	7,067	12	20	3	14
Ariz.	329	403	13,900	12,732	2,361	2,699	10	15
Utah	33	51	3,406	2,929	5	20	15	4
Nev.¶	177	242	4,901	5,067	32	51	9	2
PACIFIC	2,313	3,954	126,613	122,768	1,086	1,689	247	286
Wash.	229	309	14,668	13,800	N	N	39	33
Oreg.¶	136	236	6,327	6,537	—	—	58	29
Calif.	1,874	3,283	99,732	95,094	1,086	1,689	146	222
Alaska	14	32	3,177	3,042	—	—	3	—
Hawaii	60	94	2,709	4,295	—	—	1	2
Guam	1	1	—	803	—	—	—	N
P.R.	537	594	2,901	2,691	N	N	—	—
V.I.	10	10	119	276	—	—	U	U
Amer. Samoa	U	U	U	U	U	U	—	U
C.N.M.I.	2	U	—	U	—	U	—	U

N: Not notifiable. U: Unavailable. —: No reported cases.

C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Incidence data for reporting years 2004 and 2005 are provisional and cumulative (year-to-date).

† Chlamydia refers to genital infections caused by *C. trachomatis*.

‡ Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention. Last update June 26, 2005.

¶ Contains data reported through National Electronic Disease Surveillance System (NEDSS).

\*\* Because of Hurricane Katrina, weekly reporting has been disrupted.

**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 15, 2005, and October 16, 2004 (41st Week)\***

Reporting area	Escherichia coli, Enterohemorrhagic (EHEC)						Giardiasis		Gonorrhea	
	O157:H7		Shiga toxin positive, serogroup non-O157		Shiga toxin positive, not serogrouped					
	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004
UNITED STATES	1,829	2,021	251	214	247	149	13,830	15,194	247,926	255,857
NEW ENGLAND	137	127	43	40	27	14	1,295	1,418	4,540	5,512
Maine	14	13	8	—	—	—	170	115	110	176
N.H.	11	15	2	5	—	—	43	32	129	97
Vt.	13	11	3	—	—	—	150	139	46	70
Mass.	53	54	6	13	27	14	548	624	1,990	2,489
R.I.	5	8	—	1	—	—	86	101	357	674
Conn.	41	26	24	21	—	—	298	407	1,908	2,006
MID. ATLANTIC	238	237	25	33	28	34	2,547	3,178	26,097	28,584
Upstate N.Y.	109	102	15	14	9	17	936	1,052	5,283	5,747
N.Y. City	11	35	—	—	—	—	650	880	7,746	8,805
N.J.	37	41	2	6	7	6	287	420	4,255	5,371
Pa.	81	59	8	13	12	11	674	826	8,813	8,661
E.N. CENTRAL	375	393	19	44	13	27	2,219	2,496	47,280	54,003
Ohio	120	80	5	9	7	17	636	640	14,489	16,422
Ind.	53	46	—	—	—	—	N	6,332	5,337	—
Ill.	45	89	1	7	1	6	449	664	14,052	16,382
Mich.	70	69	1	10	5	4	609	551	8,149	11,968
Wis.	87	109	12	18	—	—	525	641	4,258	3,894
W.N. CENTRAL	323	423	26	30	50	20	1,591	1,647	14,368	13,536
Minn.	108	99	9	11	32	4	693	589	2,524	2,327
Iowa	63	111	—	—	—	—	211	237	1,236	975
Mo.	71	77	11	15	7	6	375	453	7,379	7,082
N. Dak.	5	12	—	—	1	6	11	20	64	94
S. Dak.	21	30	3	—	—	—	79	50	282	218
Nebr.	23	61	3	4	4	—	81	118	915	851
Kans.	32	33	—	—	6	4	141	180	1,968	1,989
S. ATLANTIC	165	141	68	24	92	35	1,996	2,324	60,953	61,765
Del.	6	2	N	N	N	N	43	41	677	708
Md.	30	20	26	4	9	3	154	103	5,543	6,374
D.C.	—	1	—	—	—	—	42	58	1,739	2,088
Va.	33	28	23	11	21	—	449	392	6,050	7,004
W. Va.	1	2	—	—	1	—	34	32	578	729
N.C.	—	—	—	—	46	25	N	N	12,180	12,189
S.C.	6	11	—	—	1	—	78	97	7,559	7,275
Ga.	24	19	15	6	—	—	422	713	11,170	11,297
Fla.	65	58	4	3	14	7	774	888	15,457	14,101
E.S. CENTRAL	108	83	5	3	21	15	330	335	21,078	20,764
Ky.	35	22	2	1	15	9	N	N	2,398	2,030
Tenn.	40	35	2	—	6	6	177	180	6,969	6,662
Ala.	26	16	—	—	—	—	153	155	6,653	6,513
Miss.	7	10	1	2	—	—	—	—	5,058	5,559
W.S. CENTRAL	43	70	13	3	8	4	252	258	33,482	34,345
Ark.	6	14	—	—	—	—	70	103	3,586	3,355
La.	3	3	11	1	3	—	48	39	6,950	8,306
Oklahoma	21	16	1	—	1	—	134	116	3,453	3,682
Tex.	13	37	1	2	4	4	N	N	19,493	19,002
MOUNTAIN	154	203	46	36	8	—	1,096	1,202	8,964	9,334
Mont.	14	16	—	—	—	—	58	62	85	63
Idaho	18	43	8	9	5	—	68	143	76	73
Wyo.	5	8	2	3	—	—	21	21	61	48
Colo.	33	47	1	1	1	—	412	417	2,393	2,370
N. Mex.	10	10	8	5	—	—	55	60	864	959
Ariz.	31	18	N	N	N	N	119	136	3,057	3,049
Utah	33	42	25	17	—	—	314	263	543	461
Nev.	10	19	2	1	2	—	49	100	1,885	2,311
PACIFIC	286	344	6	1	—	—	2,504	2,336	31,164	28,014
Wash.	89	119	—	—	—	—	281	288	2,880	2,119
Oreg.	67	60	6	1	—	—	297	363	1,094	955
Calif.	108	155	—	—	—	—	1,792	1,550	26,259	23,476
Alaska	12	1	—	—	—	—	83	70	437	467
Hawaii	10	9	—	—	—	—	51	65	494	997
Guam	N	N	—	—	—	—	—	2	—	125
P.R.	2	1	—	—	—	—	133	223	267	199
V.I.	—	—	—	—	—	—	—	—	35	80
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	—	U	—	U	—	U	—	U	—	U

N: Not notifiable.

U: Unavailable.

—: No reported cases.

C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Incidence data for reporting years 2004 and 2005 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 15, 2005, and October 16, 2004 (41st Week)\*

Reporting area	<i>Haemophilus influenzae</i> , invasive							
	All ages		Age <5 years				Unknown serotype	
	All serotypes		Serotype b	Cum.	Non-serotype b	Cum.	Cum.	Cum.
	Cum. 2005	Cum. 2004		2004	2005	2004	2005	2004
UNITED STATES	1,658	1,556	4	10	90	90	149	147
NEW ENGLAND	133	141	—	1	10	8	3	1
Maine	6	12	—	—	—	—	1	—
N.H.	6	16	—	—	—	2	—	—
Vt.	8	6	—	—	—	—	—	1
Mass.	65	65	—	1	3	3	1	—
R.I.	7	3	—	—	2	—	—	—
Conn.	41	39	—	—	5	3	1	—
MID. ATLANTIC	331	318	—	1	—	4	37	34
Upstate N.Y.	100	104	—	1	—	4	8	5
N.Y. City	58	71	—	—	—	—	10	13
N.J.	65	61	—	—	—	—	9	3
Pa.	108	82	—	—	—	—	10	13
E.N. CENTRAL	226	295	1	—	4	8	16	42
Ohio	95	82	—	—	—	2	10	14
Ind.	55	41	—	—	4	4	—	1
Ill.	35	105	—	—	—	—	3	20
Mich.	18	18	1	—	—	2	2	4
Wis.	23	49	—	—	—	—	1	3
W.N. CENTRAL	93	89	—	2	3	3	8	11
Minn.	38	40	—	1	3	3	2	1
Iowa	1	1	—	1	—	—	—	—
Mo.	32	34	—	—	—	—	5	7
N. Dak.	1	3	—	—	—	—	1	—
S. Dak.	—	—	—	—	—	—	—	2
Nebr.	9	5	—	—	—	—	—	1
Kans.	12	6	—	—	—	—	—	1
S. ATLANTIC	393	351	1	—	24	24	21	25
Del.	—	—	—	—	—	—	—	—
Md.	58	54	—	—	5	5	1	—
D.C.	—	3	—	—	—	—	—	1
Va.	38	33	—	—	—	—	—	5
W. Va.	23	16	—	—	1	4	4	—
N.C.	68	46	1	—	8	6	—	1
S. C.	23	10	—	—	—	—	—	1
Ga.	79	92	—	—	—	—	11	16
Fla.	104	97	—	—	10	9	5	1
E.S. CENTRAL	93	62	—	1	1	—	6	8
Ky.	8	6	—	—	1	—	2	—
Tenn.	67	41	—	—	—	—	—	6
Ala.	18	13	—	1	—	—	4	2
Miss.	—	2	—	—	—	—	—	—
W.S. CENTRAL	91	61	1	1	8	8	7	1
Ark.	5	2	—	—	—	1	—	1
La.	30	12	1	—	2	—	7	1
Okl.	54	46	—	—	5	7	—	—
Tex.	2	1	—	1	—	—	—	—
MOUNTAIN	186	162	—	4	13	25	37	18
Mont.	—	—	—	—	—	—	—	—
Idaho	3	5	—	—	—	—	1	2
Wyo.	6	1	—	—	—	—	1	—
Colo.	36	40	—	—	—	—	9	5
N. Mex.	16	36	—	1	4	8	2	6
Ariz.	95	56	—	—	7	11	14	2
Utah	16	12	—	2	—	2	7	2
Nev.	14	12	—	1	2	3	3	1
PACIFIC	112	77	1	—	27	10	14	7
Wash.	3	1	—	—	—	—	2	1
Oreg.	29	38	—	—	—	—	5	3
Calif.	47	25	1	—	27	10	2	1
Alaska	25	5	—	—	—	—	5	1
Hawaii	8	8	—	—	—	—	—	1
Guam	—	—	—	—	—	—	—	—
P.R.	3	2	—	—	—	—	1	2
V.I.	—	—	—	—	—	—	—	—
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	—	U	—	U	—	U	—	U

N: Not notifiable.

U: Unavailable.

—: No reported cases.

C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Incidence data for reporting years 2004 and 2005 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 15, 2005, and October 16, 2004  
(41st Week)\*

Reporting area	Hepatitis (viral, acute), by type					
	A		B		C	
	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004
UNITED STATES	3,197	4,691	4,259	4,592	555	631
NEW ENGLAND	418	805	226	296	14	14
Maine	2	12	15	4	—	—
N.H.	72	16	20	27	—	—
Vt.	6	8	4	5	11	6
Mass.	285	686	158	161	—	7
R.I.	10	20	1	5	—	—
Conn.	43	63	28	94	3	1
MID. ATLANTIC	532	630	849	607	84	117
Upstate N.Y.	89	76	75	64	15	10
N.Y. City	240	273	94	121	—	—
N.J.	120	150	507	179	—	—
Pa.	83	131	173	243	69	107
E.N. CENTRAL	296	400	369	443	107	87
Ohio	43	40	105	94	6	4
Ind.	44	52	42	38	23	7
Ill.	69	132	84	71	—	13
Mich.	117	122	138	206	78	63
Wis.	23	54	—	34	—	—
W.N. CENTRAL	74	129	224	266	30	19
Minn.	3	31	29	41	5	16
Iowa	19	38	21	14	—	—
Mo.	34	26	129	162	23	3
N. Dak.	—	1	—	4	1	—
S. Dak.	—	3	3	1	—	—
Nebr.	4	12	21	31	1	—
Kans.	14	18	21	13	—	—
S. ATLANTIC	568	840	1,080	1,430	110	155
Del.	4	6	38	40	7	26
Md.	60	91	122	125	21	3
D.C.	4	7	10	15	—	2
Va.	66	96	119	198	11	13
W. Va.	4	5	32	35	14	20
N.C.	70	76	128	138	17	10
S.C.	32	39	114	113	2	14
Ga.	94	287	131	378	7	14
Fla.	234	233	386	388	31	53
E.S. CENTRAL	217	137	280	392	72	78
Ky.	22	29	52	59	9	23
Tenn.	142	86	115	181	15	28
Ala.	34	8	61	62	13	4
Miss.	19	14	52	90	35	23
W.S. CENTRAL	231	566	342	278	67	84
Ark.	8	60	34	97	1	2
La.	58	41	57	52	11	3
Okl.	4	19	33	57	5	3
Tex.	161	446	218	72	50	76
MOUNTAIN	275	354	443	370	37	37
Mont.	7	6	3	1	1	2
Idaho	16	17	12	10	1	1
Wyo.	—	5	1	7	—	2
Colo.	37	42	41	50	18	11
N. Mex.	19	22	6	16	—	U
Ariz.	168	213	313	191	—	5
Utah	18	34	39	32	8	4
Nev.	10	15	28	63	9	12
PACIFIC	586	830	446	510	34	40
Wash.	37	50	56	41	U	U
Oreg.	33	58	80	92	13	15
Calif.	491	696	298	358	21	24
Alaska	4	4	7	10	—	—
Hawaii	21	22	5	9	—	1
Guam	—	1	—	12	—	9
P.R.	54	37	35	65	—	—
V.I.	—	—	—	—	—	—
Amer. Samoa	U	U	U	U	U	U
C.N.M.I.	—	U	—	U	—	U

N: Not notifiable.

U: Unavailable

—: No reported cases.

C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Incidence data for reporting years 2004 and 2005 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 15, 2005, and October 16, 2004  
(41st Week)\*

Reporting area	Legionellosis		Listeriosis		Lyme disease		Malaria	
	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004
UNITED STATES	1,450	1,599	587	571	16,248	15,006	982	1,142
NEW ENGLAND	76	74	44	39	1,853	2,653	57	80
Maine	4	1	1	6	159	29	4	7
N.H.	7	7	5	3	156	173	5	5
Vt.	7	4	2	1	38	44	1	4
Mass.	20	34	12	13	900	1,378	29	47
R.I.	16	13	6	1	32	179	2	4
Conn.	22	15	18	15	568	850	16	13
MID. ATLANTIC	512	450	153	138	10,643	9,214	264	302
Upstate N.Y.	142	89	47	40	3,179	3,116	41	39
N.Y. City	64	62	28	23	—	326	132	162
N.J.	85	72	31	29	2,965	2,367	61	61
Pa.	221	227	47	46	4,499	3,405	30	40
E.N. CENTRAL	275	393	59	100	1,067	1,223	78	104
Ohio	146	184	28	37	63	45	20	26
Ind.	14	40	4	16	23	23	1	13
Ill.	15	40	1	20	—	86	27	36
Mich.	86	110	19	22	47	24	19	17
Wis.	14	19	7	5	934	1,045	11	12
W.N. CENTRAL	61	46	33	14	687	424	40	59
Minn.	16	7	10	4	581	343	11	24
Iowa	4	4	8	2	74	46	8	3
Mo.	26	22	4	5	21	23	16	18
N. Dak.	2	2	3	—	—	—	—	3
S. Dak.	10	3	3	—	—	1	1	3
Nebr.	1	3	4	3	2	8	1	3
Kans.	2	5	4	—	9	3	4	7
S. ATLANTIC	302	320	119	94	1,790	1,307	236	268
Del.	12	13	N	N	538	258	3	6
Md.	86	67	16	14	905	721	90	61
D.C.	9	10	—	5	8	11	8	11
Va.	36	39	13	14	189	122	26	35
W. Va.	15	9	3	3	10	26	1	2
N.C.	24	29	22	16	44	97	25	17
S.C.	11	9	9	10	18	21	6	10
Ga.	19	37	19	14	4	12	33	54
Fla.	90	107	37	18	74	39	44	72
E.S. CENTRAL	62	85	27	21	32	38	24	30
Ky.	22	33	4	4	5	14	8	4
Tenn.	26	37	11	11	27	19	12	10
Ala.	11	12	8	4	—	5	4	11
Miss.	3	3	4	2	—	—	—	5
W.S. CENTRAL	25	111	27	34	55	56	77	113
Ark.	4	—	2	3	4	8	5	8
La.	1	7	8	3	4	2	2	5
Oklahoma	7	5	3	—	—	—	9	7
Tex.	13	99	14	28	47	46	61	93
MOUNTAIN	75	68	14	22	21	17	43	45
Mont.	5	2	—	—	—	—	—	—
Idaho	3	7	—	1	2	6	—	1
Wyo.	4	5	—	—	3	3	2	—
Colo.	19	18	5	11	4	—	21	18
N. Mex.	2	4	4	1	1	1	2	4
Ariz.	21	11	—	—	7	6	10	10
Utah	13	17	3	1	2	1	6	7
Nev.	8	4	2	8	2	—	2	5
PACIFIC	62	52	111	109	100	74	163	141
Wash.	—	9	7	9	7	12	12	15
Oreg.	N	N	10	5	15	24	7	16
Calif.	60	43	93	91	75	36	125	105
Alaska	—	—	—	—	3	2	5	1
Hawaii	2	—	1	4	N	N	14	4
Guam	—	—	—	—	—	—	—	—
P.R.	—	—	—	—	N	N	2	—
V.I.	—	—	—	—	—	—	—	—
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	—	U	U	U	—	U	—	U

N: Not notifiable.

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—: No reported cases.

C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Incidence data for reporting years 2004 and 2005 are provisional and cumulative (year-to-date).

**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 15, 2005, and October 16, 2004 (41st Week)\***

Reporting area	Meningococcal disease									
	All serogroups		Serogroup A, C, Y, and W-135		Serogroup B		Other serogroup		Serogroup unknown	
	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004
UNITED STATES	940	966	74	74	45	37	—	1	821	854
NEW ENGLAND	64	54	1	5	—	6	—	1	63	42
Maine	2	10	—	—	—	1	—	—	2	9
N.H.	12	4	—	—	—	—	—	—	12	4
Vt.	6	2	—	—	—	—	—	—	6	2
Mass.	29	31	—	5	—	5	—	—	29	21
R.I.	3	1	—	—	—	—	—	—	3	1
Conn.	12	6	1	—	—	—	—	1	11	5
MID. ATLANTIC	121	133	34	36	6	5	—	—	81	92
Upstate N.Y.	30	34	4	5	3	3	—	—	23	26
N.Y. City	17	24	—	—	—	—	—	—	17	24
N.J.	31	29	—	—	—	—	—	—	31	29
Pa.	43	46	30	31	3	2	—	—	10	13
E. N. CENTRAL	95	108	23	24	9	6	—	—	63	78
Ohio	32	55	—	4	5	5	—	—	27	46
Ind.	18	17	—	1	4	1	—	—	14	15
Ill.	12	1	—	—	—	—	—	—	12	1
Mich.	23	19	23	19	—	—	—	—	—	—
Wis.	10	16	—	—	—	—	—	—	10	16
W.N. CENTRAL	63	66	3	—	1	4	—	—	59	62
Minn.	13	22	1	—	—	—	—	—	12	22
Iowa	15	14	—	—	1	2	—	—	14	12
Mo.	21	17	1	—	—	1	—	—	20	16
N. Dak.	—	2	—	—	—	—	—	—	—	2
S. Dak.	3	2	1	—	—	1	—	—	2	1
Nebr.	4	4	—	—	—	—	—	—	4	4
Kans.	7	5	—	—	—	—	—	—	7	5
S. ATLANTIC	184	187	5	2	9	2	—	—	170	183
Del.	4	4	—	—	—	—	—	—	4	4
Md.	19	10	2	—	2	—	—	—	15	10
D.C.	—	5	—	2	—	—	—	—	—	3
Va.	28	16	—	—	—	—	—	—	28	16
W. Va.	6	5	1	—	—	—	—	—	5	5
N.C.	28	26	2	—	7	2	—	—	19	24
S.C.	14	14	—	—	—	—	—	—	14	14
Ga.	15	12	—	—	—	—	—	—	15	12
Fla.	70	95	—	—	—	—	—	—	70	95
E.S. CENTRAL	48	54	1	1	3	1	—	—	44	52
Ky.	15	9	—	1	3	1	—	—	12	7
Tenn.	22	18	—	—	—	—	—	—	22	18
Ala.	6	14	1	—	—	—	—	—	5	14
Miss.	5	13	—	—	—	—	—	—	5	13
W.S. CENTRAL	79	54	1	2	5	1	—	—	73	51
Ark.	13	14	—	—	—	—	—	—	13	14
La.	26	29	—	1	2	—	—	—	24	28
Okla.	13	8	1	1	3	1	—	—	9	6
Tex.	27	3	—	—	—	—	—	—	27	3
MOUNTAIN	76	56	5	1	5	5	—	—	66	50
Mont.	—	3	—	—	—	—	—	—	—	3
Idaho	2	6	—	—	—	—	—	—	2	6
Wyo.	—	4	—	—	—	—	—	—	—	4
Colo.	17	13	4	—	—	—	—	—	13	13
N. Mex.	3	7	—	1	—	3	—	—	3	3
Ariz.	36	11	—	—	2	1	—	—	34	10
Utah	10	5	1	—	2	—	—	—	7	5
Nev.	8	7	—	—	1	1	—	—	7	6
PACIFIC	210	254	1	3	7	7	—	—	202	244
Wash.	41	26	1	3	4	7	—	—	36	16
Oreg.	28	49	—	—	—	—	—	—	28	49
Calif.	127	169	—	—	—	—	—	—	127	169
Alaska	3	4	—	—	—	—	—	—	3	4
Hawaii	11	6	—	—	3	—	—	—	8	6
Guam	—	1	—	—	—	—	—	—	—	1
P.R.	6	13	—	—	—	—	—	—	6	13
V.I.	—	—	—	—	—	—	—	—	—	—
Amer. Samoa	1	1	—	—	—	—	—	—	1	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—

N: Not notifiable.

U: Unavailable.

—: No reported cases.

C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Incidence data for reporting years 2004 and 2005 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 15, 2005, and October 16, 2004 (41st Week)\*

Reporting area	Pertussis		Rabies, animal		Rocky Mountain spotted fever		Salmonellosis		Shigellosis	
	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004
UNITED STATES	15,797	15,472	4,426	5,352	1,348	1,226	32,406	33,179	10,479	10,443
NEW ENGLAND	892	1,464	581	544	3	17	1,750	1,709	247	250
Maine	20	8	45	47	N	—	119	90	9	6
N.H.	48	58	12	23	1	—	138	117	7	7
Vt.	77	62	50	31	—	—	87	50	16	2
Mass.	681	1,252	291	223	1	13	921	980	154	160
R.I.	29	31	19	36	1	1	82	99	14	18
Conn.	37	53	164	184	—	3	403	373	47	57
MID. ATLANTIC	1,074	2,291	787	804	86	63	3,922	4,732	1,021	994
Upstate N.Y.	418	1,605	443	444	3	1	1,009	991	226	368
N.Y. City	71	165	27	11	7	20	888	1,085	318	332
N.J.	183	155	N	N	27	13	670	912	259	206
Pa.	402	366	317	349	49	29	1,355	1,744	218	88
E.N. CENTRAL	2,830	5,802	185	167	35	33	4,244	4,241	723	944
Ohio	927	464	67	66	26	9	1,093	1,021	84	137
Ind.	256	132	11	10	2	6	507	401	127	175
Ill.	538	1,074	46	46	1	14	1,222	1,374	201	344
Mich.	231	219	35	39	6	2	728	687	188	103
Wis.	878	3,913	26	6	—	2	694	758	123	185
W.N. CENTRAL	2,517	1,600	365	538	151	109	2,008	1,973	1,223	336
Minn.	966	277	62	75	2	—	462	490	72	57
Iowa	465	192	96	88	4	1	314	376	64	59
Mo.	357	291	68	53	129	90	659	522	813	129
N. Dak.	118	684	24	52	—	—	31	38	4	3
S. Dak.	85	30	48	88	5	4	125	98	33	9
Nebr.	170	30	—	92	4	14	117	137	61	19
Kans.	356	96	67	90	7	—	300	312	176	60
S. ATLANTIC	1,077	591	1,294	1,857	648	627	9,341	8,843	1,702	2,373
Del.	14	1	—	9	3	5	96	97	10	6
Md.	132	107	258	265	73	62	657	694	74	122
D.C.	7	7	—	—	2	—	45	51	11	33
Va.	283	163	399	399	87	23	920	937	108	126
W. Va.	37	18	50	53	5	5	139	191	1	7
N.C.	98	67	398	505	356	386	1,220	1,253	149	270
S.C.	302	103	5	135	50	56	1,053	816	77	477
Ga.	31	19	182	286	57	75	1,387	1,594	410	525
Fla.	173	106	2	205	15	15	3,824	3,210	862	807
E.S. CENTRAL	421	244	117	127	256	175	2,300	2,196	1,010	675
Ky.	122	57	11	20	3	2	395	284	257	59
Tenn.	187	142	41	44	194	93	626	580	477	349
Ala.	73	29	63	53	55	52	571	590	198	220
Miss.	39	16	2	10	4	28	708	742	78	47
W.S. CENTRAL	1,405	688	748	940	131	178	2,829	3,259	2,252	2,745
Ark.	221	59	32	46	102	97	610	453	54	60
La.	33	14	—	4	5	5	620	745	109	247
Okla.	—	33	67	93	7	70	332	332	537	378
Tex.	1,151	582	649	797	17	6	1,267	1,729	1,552	2,060
MOUNTAIN	3,197	1,225	203	197	30	20	1,821	1,859	664	636
Mont.	525	41	15	24	1	3	75	173	5	4
Idaho	123	33	—	7	3	4	83	129	5	12
Wyo.	43	28	16	5	2	4	70	45	4	5
Colo.	1,058	619	14	46	5	4	507	451	130	130
N. Mex.	116	131	7	4	2	2	188	231	83	115
Ariz.	839	190	124	102	13	2	533	499	374	289
Utah	461	153	14	6	4	1	280	194	35	35
Nev.	32	30	13	3	—	—	85	137	28	46
PACIFIC	2,384	1,567	146	178	8	4	4,191	4,367	1,637	1,490
Wash.	653	566	U	U	—	—	428	435	98	90
Oreg.	547	369	6	6	1	2	295	369	99	63
Calif.	964	601	139	161	7	2	3,179	3,202	1,405	1,287
Alaska	101	11	1	11	—	—	46	48	7	6
Hawaii	119	20	—	—	—	—	243	313	28	44
Guam	—	—	—	—	—	—	—	49	—	42
P.R.	5	4	54	50	N	N	362	357	3	25
V.I.	—	—	—	—	—	—	—	—	—	—
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	—	U	—	—	—	—	U	—	—	U

N: Not notifiable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Incidence data for reporting years 2004 and 2005 are provisional and cumulative (year-to-date).

**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 15, 2005, and October 16, 2004  
(41st Week)\***

Reporting area	Streptococcal disease, invasive, group A		Streptococcus pneumoniae, invasive disease				Syphilis			
			Drug resistant, all ages		Age <5 years					
	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004
UNITED STATES	3,460	3,613	1,730	1,737	581	612	6,187	6,105	189	309
NEW ENGLAND	141	235	90	120	43	82	167	157	1	4
Maine	9	10	N	N	—	4	1	2	—	—
N.H.	13	16	—	—	4	N	14	4	—	3
Vt.	9	8	10	6	—	1	1	—	—	—
Mass.	101	107	64	34	38	46	104	96	—	—
R.I.	9	17	16	18	1	6	13	23	—	1
Conn.	U	77	U	62	U	25	34	32	1	—
MID. ATLANTIC	733	608	163	121	111	87	797	785	21	30
Upstate N.Y.	222	198	63	49	49	59	73	75	5	3
N.Y. City	134	102	U	U	20	U	486	484	5	13
N.J.	149	130	N	N	19	8	107	120	11	13
Pa.	228	178	100	72	23	20	131	106	—	1
E.N. CENTRAL	659	823	467	383	173	145	643	695	26	46
Ohio	161	194	294	268	66	64	170	178	1	2
Ind.	86	85	162	115	45	30	52	47	1	2
III.	116	218	11	—	50	3	328	294	10	14
Mich.	261	251	—	N	—	N	65	148	12	28
Wis.	35	75	N	N	12	48	28	—	2	—
W.N. CENTRAL	222	261	38	17	65	84	194	133	5	5
Minn.	86	125	—	—	42	54	52	20	1	1
Iowa	N	N	N	N	—	N	3	5	—	—
Mo.	56	56	31	12	9	13	118	80	4	2
N. Dak.	9	11	2	—	3	2	—	—	—	—
S. Dak.	20	15	3	5	—	—	1	—	—	—
Nebr.	17	18	2	—	—	7	4	6	—	—
Kans.	34	36	N	N	11	8	16	22	—	2
S. ATLANTIC	741	721	684	894	67	45	1,554	1,523	35	50
Del.	5	3	1	4	—	N	9	8	—	1
Md.	166	113	—	—	44	31	249	284	12	8
D.C.	8	9	15	8	2	4	86	47	—	1
Va.	72	62	N	N	—	N	104	82	4	2
W. Va.	22	23	97	96	21	10	4	3	—	—
N.C.	104	104	N	N	U	U	211	146	8	9
S.C.	26	50	—	83	—	N	57	97	4	11
Ga.	143	172	111	219	—	N	262	289	1	4
Fla.	195	185	460	484	—	N	572	567	6	14
E.S. CENTRAL	145	188	138	122	11	13	345	328	17	20
Ky.	31	54	25	24	N	N	37	34	—	1
Tenn.	114	134	113	96	—	N	172	102	12	8
Ala.	—	—	—	—	—	N	107	144	4	9
Miss.	—	—	—	2	11	13	29	48	1	2
W.S. CENTRAL	218	286	98	56	60	123	975	977	55	61
Ark.	16	16	12	8	14	8	39	42	—	3
La.	6	2	86	48	23	27	176	247	6	4
Okla.	95	56	N	N	23	36	30	20	1	2
Tex.	101	212	N	N	—	52	730	668	48	52
MOUNTAIN	516	392	52	23	42	33	309	315	15	39
Mont.	—	—	—	—	—	—	5	1	—	—
Idaho	2	8	N	N	—	N	20	16	1	2
Wyo.	3	7	22	9	—	—	—	3	—	—
Colo.	188	85	N	N	41	33	31	52	—	—
N. Mex.	41	83	—	N	—	—	38	71	2	2
Ariz.	212	171	N	N	—	N	134	132	12	34
Utah	69	35	28	12	1	—	6	10	—	1
Nev.	1	3	2	2	—	—	75	30	—	—
PACIFIC	85	99	—	1	9	—	1,203	1,192	14	54
Wash.	N	N	N	N	N	N	115	104	—	—
Oreg.	N	N	N	N	6	N	22	24	—	—
Calif.	—	—	N	N	N	N	1,056	1,058	14	54
Alaska	—	—	—	—	—	N	6	1	—	—
Hawaii	85	99	—	1	3	—	4	5	—	—
Guam	—	—	—	—	—	—	—	1	—	—
P.R.	N	N	N	N	—	N	156	112	8	5
V.I.	—	—	—	—	—	—	—	4	—	—
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	—	U	—	U	—	U	—	U	—	U

N: Not notifiable. U: Unavailable.

—: No reported cases.

C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Incidence data for reporting years 2004 and 2005 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 15, 2005, and October 16, 2004  
(41st Week)\*

Reporting area	Tuberculosis		Typhoid fever		Varicella (chickenpox)		West Nile virus disease†		
	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Cum. 2005	Cum. 2004	Neuroinvasive	Cum. 2004	Cum. 2005
UNITED STATES	8,813	10,436	209	263	18,501	21,620	913	1,120	1,240
NEW ENGLAND	266	342	22	20	1,032	2,346	9	—	3
Maine	14	16	1	—	213	181	—	—	—
N.H.	5	12	—	—	222	—	—	—	—
Vt.	4	2	—	—	59	413	—	—	—
Mass.	168	197	13	14	538	325	4	—	1
R.I.	24	42	1	1	—	—	1	—	—
Conn.	51	73	7	5	U	1,427	4	—	2
MID. ATLANTIC	1,571	1,614	36	66	3,575	75	24	17	15
Upstate N.Y.	200	211	5	9	—	—	—	5	—
N.Y. City	766	809	12	26	—	—	8	2	4
N.J.	371	355	10	16	—	—	2	1	1
Pa.	234	239	9	15	3,575	75	14	9	10
E.N. CENTRAL	992	928	19	32	4,885	9,233	207	66	98
Ohio	183	154	2	6	1,117	1,095	44	11	12
Ind.	106	102	1	—	482	N	7	8	—
Ill.	477	413	5	15	67	4,703	120	29	78
Mich.	163	191	6	9	2,885	2,905	29	13	4
Wis.	63	68	5	2	334	530	7	5	4
W.N. CENTRAL	475	355	4	7	371	146	107	86	362
Minn.	145	138	4	3	—	—	16	13	22
Iowa	170	32	—	—	N	N	10	13	14
Mo.	74	89	—	2	266	5	11	27	10
N. Dak.	2	3	—	—	20	81	11	2	72
S. Dak.	11	8	—	—	85	60	34	6	192
Nebr.	28	26	—	2	—	—	19	7	49
Kans.	45	59	—	—	—	—	6	18	3
S. ATLANTIC	1,974	2,137	41	37	1,630	1,956	24	64	19
Del.	12	17	1	—	23	5	1	—	—
Md.	211	219	9	11	—	—	4	9	—
D.C.	42	71	—	—	28	20	—	1	—
Va.	234	207	15	6	357	474	—	4	—
W. Va.	19	16	—	—	819	1,109	—	—	N
N.C.	224	253	3	6	—	N	2	3	1
S.C.	179	149	—	—	403	348	4	—	—
Ga.	308	459	2	4	—	—	7	14	5
Fla.	745	746	11	10	—	—	6	33	13
E.S. CENTRAL	394	489	5	8	—	38	55	60	32
Ky.	84	87	2	3	N	N	4	1	—
Tenn.	161	158	—	5	—	—	11	13	1
Ala.	149	151	1	—	—	38	5	15	2
Miss.	—	93	2	—	—	—	35	31	29
W.S. CENTRAL	984	1,535	15	20	4,973	5,953	140	218	83
Ark.	84	94	—	—	1	—	8	14	13
La.	—	—	1	—	109	48	58	77	23
Okl.	113	130	—	1	—	—	4	16	5
Tex.	787	1,311	14	19	4,863	5,905	70	111	42
MOUNTAIN	279	405	9	7	2,035	1,873	100	321	175
Mont.	8	4	—	—	—	—	8	2	17
Idaho	—	3	—	—	—	—	2	1	7
Wyo.	—	2	—	—	47	28	3	2	4
Colo.	46	98	4	2	1,457	1,497	14	41	61
N. Mex.	14	23	—	—	139	U	17	31	12
Ariz.	168	166	3	2	—	—	25	213	33
Utah	25	32	1	1	392	348	19	6	26
Nev.	18	77	1	2	—	—	12	25	15
PACIFIC	1,878	2,631	58	66	—	—	247	288	453
Wash.	196	179	5	6	N	N	—	—	—
Oreg.	54	81	3	1	—	—	—	—	5
Calif.	1,502	2,249	38	53	—	—	247	288	448
Alaska	32	30	—	—	—	—	—	—	—
Hawaii	94	92	12	6	—	—	—	—	—
Guam	—	44	—	—	—	136	—	—	—
P.R.	—	83	—	—	517	323	—	—	—
V.I.	—	—	—	—	—	—	—	—	—
Amer. Samoa	U	U	U	U	U	U	U	U	—
C.N.M.I.	—	U	—	—	—	—	—	—	—

N: Not notifiable.

U: Unavailable.

—: No reported cases.

C.N.M.I.: Commonwealth of Northern Mariana Islands.

\* Incidence data for reporting years 2004 and 2005 are provisional and cumulative (year-to-date).

† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNet Surveillance).

‡ Not previously notifiable.

TABLE III. Deaths in 122 U.S. cities,\* week ending October 15, 2005 (41st Week)

Reporting Area	All causes, by age (years)						Reporting Area	All causes, by age (years)						P&I† Total	
	All Ages	>65	45-64	25-44	1-24	<1		All Ages	>65	45-64	25-44	1-24	<1		
NEW ENGLAND	422	293	84	29	5	11	38	S. ATLANTIC	999	625	245	74	29	26	49
Boston, Mass.	141	98	28	9	3	3	15	Atlanta, Ga.	99	57	25	8	7	2	4
Bridgeport, Conn.	21	18	1	2	—	—	—	Baltimore, Md.	133	81	40	10	1	1	11
Cambridge, Mass.	19	15	4	—	—	—	3	Charlotte, N.C.	93	56	26	5	2	4	6
Fall River, Mass.	14	9	4	1	—	—	1	Jacksonville, Fla.	125	77	30	11	5	2	4
Hartford, Conn.	46	28	8	5	—	5	5	Miami, Fla.	92	61	20	5	4	2	3
Lowell, Mass.	18	15	3	—	—	—	3	Norfolk, Va.	47	32	10	3	2	—	—
Lynn, Mass.	13	11	2	—	—	—	3	Richmond, Va.	62	37	15	4	3	3	2
New Bedford, Mass.	18	14	2	2	—	—	2	Savannah, Ga.	60	41	12	5	1	1	4
New Haven, Conn.	35	23	8	1	1	2	1	St. Petersburg, Fla.	16	12	3	—	—	1	5
Providence, R.I.	U	U	U	U	U	U	U	Tampa, Fla.	154	97	34	13	3	7	5
Somerville, Mass.	3	2	1	—	—	—	—	Washington, D.C.	100	60	27	9	1	3	3
Springfield, Mass.	33	18	12	2	—	1	1	Wilmington, Del.	18	14	3	1	—	—	2
Waterbury, Conn.	20	15	3	1	1	—	1	E.S. CENTRAL	596	372	153	40	14	17	35
Worcester, Mass.	41	27	8	6	—	—	3	Birmingham, Ala.	127	85	27	11	1	3	7
MID. ATLANTIC	1,977	1,359	433	117	38	28	107	Chattanooga, Tenn.	61	34	20	2	1	4	1
Albany, N.Y.	42	32	8	—	1	1	4	Knoxville, Tenn.	96	71	20	2	1	2	4
Allentown, Pa.	17	11	5	1	—	—	2	Lexington, Ky.	50	23	14	10	—	3	2
Buffalo, N.Y.	115	73	25	8	7	2	9	Memphis, Tenn.	U	U	U	U	U	U	U
Camden, N.J.	31	17	10	3	—	1	3	Mobile, Ala.	78	48	25	3	2	—	2
Elizabeth, N.J.	10	7	2	1	—	—	1	Montgomery, Ala.	41	29	10	1	1	—	3
Erie, Pa.	47	40	6	1	—	—	7	Nashville, Tenn.	143	82	37	11	8	5	16
Jersey City, N.J.	26	15	11	—	—	—	—	W.S. CENTRAL	1,444	907	338	116	50	33	91
New York City, N.Y.	1,014	717	209	55	17	16	42	Austin, Tex.	102	67	20	6	4	5	6
Newark, N.J.	55	22	18	10	3	2	3	Baton Rouge, La.	34	23	9	1	1	—	—
Paterson, N.J.	9	3	4	1	1	—	1	Corpus Christi, Tex.	62	45	10	4	2	1	2
Philadelphia, Pa.	294	185	80	18	7	2	10	Dallas, Tex.	166	81	50	22	8	5	12
Pittsburgh, Pa. <sup>§</sup>	22	11	7	2	1	1	2	El Paso, Tex.	97	68	20	5	3	1	9
Reading, Pa.	30	24	3	3	—	—	—	Ft. Worth, Tex.	104	62	20	10	5	7	4
Rochester, N.Y.	106	83	16	4	1	2	9	Houston, Tex.	409	236	111	38	14	10	28
Schenectady, N.Y.	19	15	3	1	—	—	3	Little Rock, Ark.	60	37	16	6	1	—	2
Scranton, Pa.	20	16	3	1	—	—	3	New Orleans, La. <sup>¶</sup>	U	U	U	U	U	U	U
Syracuse, N.Y.	73	57	14	1	—	1	7	San Antonio, Tex.	265	178	60	17	7	3	15
Trenton, N.J.	16	12	3	1	—	—	1	Shreveport, La.	43	31	7	3	1	1	9
Utica, N.Y.	11	8	1	2	—	—	—	Tulsa, Okla.	102	79	15	4	4	—	4
Yonkers, N.Y.	20	11	5	4	—	—	—	MOUNTAIN	1,036	666	227	79	42	22	58
E.N. CENTRAL	1,870	1,229	450	115	43	33	102	Albuquerque, N.M.	121	82	30	6	3	—	4
Akron, Ohio	49	33	9	3	1	3	2	Boise, Idaho	51	38	8	2	1	2	2
Canton, Ohio	35	26	4	2	2	1	6	Colo. Springs, Colo.	61	40	14	4	1	2	3
Chicago, Ill.	336	192	99	27	11	7	24	Denver, Colo.	78	42	18	6	6	6	6
Cincinnati, Ohio	61	43	12	4	1	1	5	Las Vegas, Nev.	243	152	57	21	12	1	12
Cleveland, Ohio	222	174	34	11	—	3	5	Ogden, Utah	34	25	5	3	—	1	3
Columbus, Ohio	156	94	39	18	4	1	8	Phoenix, Ariz.	161	85	41	22	7	6	9
Dayton, Ohio	123	85	27	5	3	3	5	Pueblo, Colo.	19	14	3	2	—	—	3
Detroit, Mich.	160	82	57	9	8	4	12	Salt Lake City, Utah	108	81	14	6	6	1	10
Evansville, Ind.	40	31	7	2	—	—	—	Tucson, Ariz.	160	107	37	7	6	3	6
Fort Wayne, Ind.	63	39	18	2	2	2	3	PACIFIC	1,368	915	309	85	38	19	129
Gary, Ind.	27	7	16	2	2	—	1	Berkeley, Calif.	12	9	2	—	1	3	—
Grand Rapids, Mich.	49	35	8	1	3	2	2	Fresno, Calif.	75	49	22	4	—	—	10
Indianapolis, Ind.	142	99	36	4	2	1	7	Glendale, Calif.	5	5	—	—	—	—	1
Lansing, Mich.	47	34	10	3	—	—	1	Honolulu, Hawaii	88	65	14	5	3	1	5
Milwaukee, Wis.	115	79	23	8	2	3	6	Long Beach, Calif.	77	53	15	7	1	1	11
Peoria, Ill.	32	24	3	5	—	—	1	Los Angeles, Calif.	143	94	30	10	5	4	20
Rockford, Ill.	50	32	13	4	1	—	6	Pasadena, Calif.	18	16	—	2	—	—	6
South Bend, Ind.	45	34	10	1	—	—	4	Portland, Oreg.	83	56	18	5	1	2	8
Toledo, Ohio	73	49	17	4	1	2	3	Sacramento, Calif.	142	95	31	10	4	2	12
Youngstown, Ohio	45	37	8	—	—	—	1	San Diego, Calif.	131	76	37	12	4	1	11
W.N. CENTRAL	467	301	122	19	12	13	32	San Francisco, Calif.	125	78	36	3	6	2	16
Des Moines, Iowa	46	33	5	4	3	1	4	San Jose, Calif.	161	112	34	9	6	—	11
Duluth, Minn.	28	19	9	—	—	—	3	Santa Cruz, Calif.	29	15	12	1	1	—	4
Kansas City, Kans.	29	19	9	1	—	—	4	Seattle, Wash.	115	73	28	8	4	2	5
Kansas City, Mo.	62	40	16	1	3	2	3	Spokane, Wash.	51	41	7	1	1	1	3
Lincoln, Nebr.	41	29	10	—	—	2	2	Tacoma, Wash.	113	78	23	8	2	2	3
Minneapolis, Minn.	46	25	12	6	1	2	6	TOTAL	10,179**	6,667	2,361	674	271	202	641
Omaha, Nebr.	64	41	18	2	2	1	6								
St. Louis, Mo.	41	19	17	3	—	2	—								
St. Paul, Minn.	45	31	11	1	—	2	4								
Wichita, Kans.	65	45	15	1	3	1	—								

U: Unavailable.

—: No reported cases.

\*Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of ≥100,000. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

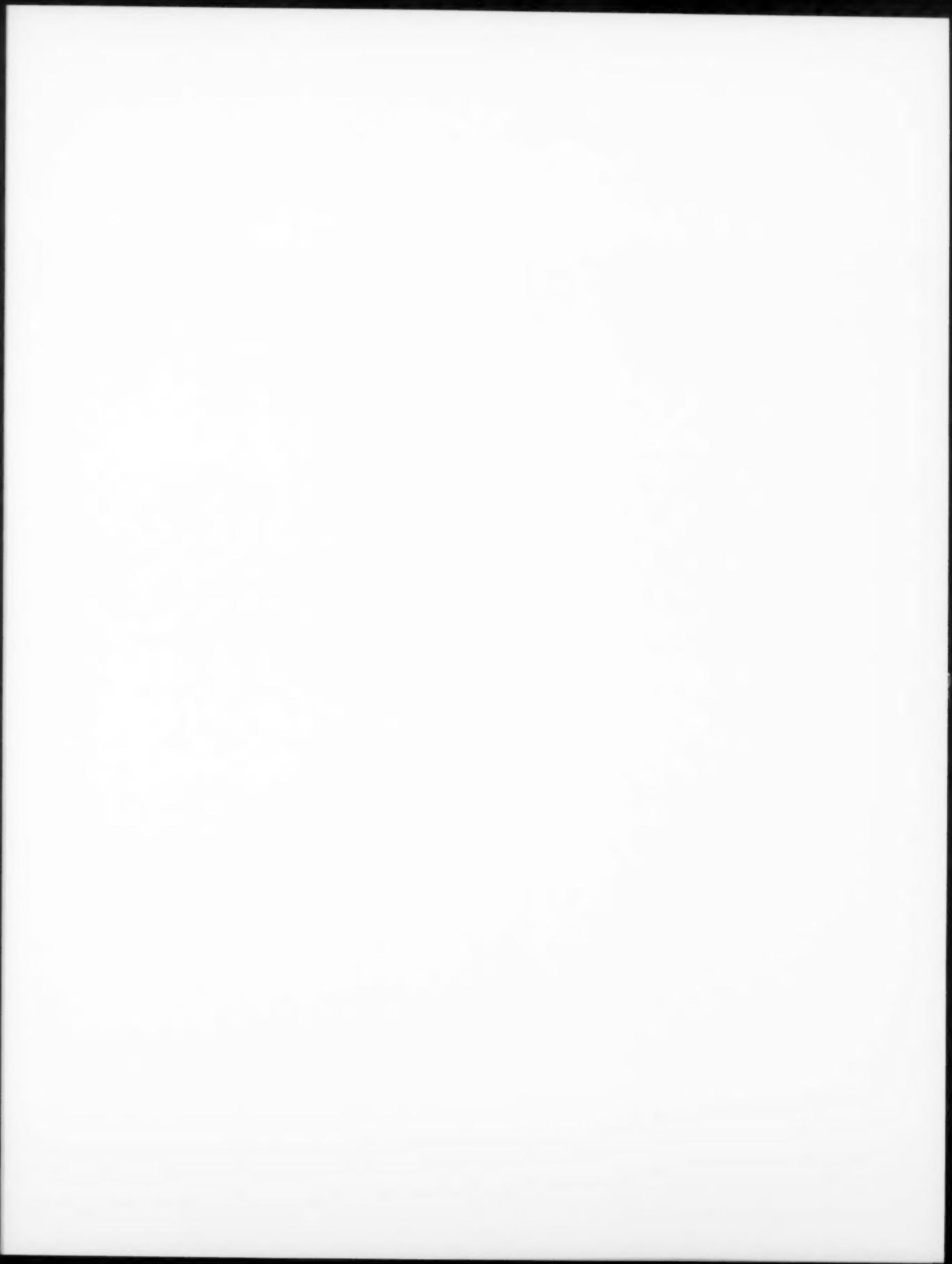
†Pneumonia and influenza.

‡Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

\*\*Because of Hurricane Katrina, weekly reporting of deaths has been temporarily disrupted.

\*\*Total includes unknown ages.





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